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ABSTRACT

This document reports the oral and written testimony of witnesses who testified at oversight hearings on vocational education in the United States. The document also includes statements from other sources not present at the hearings. The testimony includes statements from U.S. Senators and Representatives, business leaders, and national and local leaders about the state of vocational education in the United States. The testimony was taken in connection with reauthorization legislation for the Carl D. Perkins Vocational Education Act. The witnesses stressed the increasing need for more, not less, vocational education, if the United States is to remain competitive in the world economy. They stressed the need for integrating academic and vocational education and making sure that every student had skills that could be used in the job market. They pointed to successes in Germany and Japan and to some local successes; however, the testimony showed that much remains to be done in improving vocational education and in improving how results are measured and programs are coordinated to reduce waste and duplication. (KC)

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OVERVIEW OF VOCATIONAL EDUCATION

ED 385 782

HEARINGS

BEFORE THE

SUBCOMMITTEE ON
EDUCATION, ARTS AND HUMANITIES

OF THE

COMMITTEE ON
LABOR AND HUMAN RESOURCES
UNITED STATES SENATE

ONE HUNDRED FOURTH CONGRESS

FIRST SESSION

ON

EXAMINING PROPOSED LEGISLATION AUTHORIZING FUNDS FOR PROGRAMS OF THE CARL D. PERKINS VOCATIONAL AND APPLIED TECHNOLOGY ACT OF 1990, FOCUSING ON THE FEDERAL AND STATE ROLE IN THE VOCATIONAL EDUCATION PROCESS

APRIL 27 AND MAY 25, 1995

Printed for the use of the Committee on Labor and Human Resources

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OVERVIEW OF VOCATIONAL EDUCATION

THURSDAY, APRIL 27, 1995

U.S. SENATE,
SUBCOMMITTEE ON EDUCATION, ARTS AND HUMANITIES,
OF THE COMMITTEE ON LABOR AND HUMAN RESOURCES,
Washington, DC.

The subcommittee met, pursuant to notice, at 9:34 a.m., in room SD–430, Dirksen Senate Office Building, Senator Jeffords (chairman of the subcommittee) presiding.

Present: Senators Jeffords, Kassebaum, Pell, and Simon.

OPENING STATEMENT OF SENATOR JEFFORDS

Senator JEFFORDS. The subcommittee will come to order.

This hearing today involves the reauthorization of the Vocational Education Act, and we will also be broadening that discussion out to other aspects of education, because we will be looking at a consolidation bill with respect to training programs and trying to take an overview of the problems of this country with respect to education and training, as well as our work force and international competitiveness.

I will go through these charts—and I assume, as I usually do with our audiences, that I am probably preaching to the choir—but I am going to go through them until, finally, somebody other than the choir understands the problems that this Nation is facing with respect to our future and our productivity.

I will also start by saying that I will make part of the record a very excellent op-ed piece by Hedrick Smith which appeared in The New York Times this past week, outlining the tremendous problems that we have with our work force and the difficulties we will face if we do not do something to get our act together before we enter the next century.

Incidentally, Hedrick Smith's book entitled, "Rethinking America," will be coming out in about 2 weeks, and I have plowed through it. It is tough in the sense that it is so well-documented and so well-done that it does require some pretty tough reading, but I think it should be required reading for anyone who is involved in vocational education or business, so I would recommend it.

[Hedrick Smith article may be found in the appendix.]

Senator JEFFORDS. We are at a defining moment in our country's history. The United States is still the most productive country in the world, but we are losing our edge to other industrialized nations like Japan and Germany, and rapidly developing countries like Taiwan, Korea and China.

Our enormous Federal trade deficit is testimony to our deficiencies. The first chart [A-may be found in the appendix] shows what has happened to the United States as far as our real income over the past 20 years. As you can see, real income in the United States has grown more slowly than in our competitor nations—much more slowly. Of course, we started from a higher level, and that is an argument that one can make, but the point is that we have really stagnated, and our productivity is just not what it ought to be.

Also, the plunging standard of living of Americans without at least a 4-year postsecondary degree over the last 25 years is another example of declining productivity. This chart [B-may be found in the appendix] shows the change in median income over the last 20 years, indicating rather dramatically that the lower two-thirds of our Nation is losing ground on income every year.

And something that does not even show up here is the number of women who were working 20 years ago versus the number of women who are working now. This chart would look even worse if you were to look at the individual workers' incomes given the fact that so many more women are in the work force today.

In the next decade, we will be surpassed as the world's foremost economic power if we do not begin to redefine our priorities on national, State and local levels. We know what our top priorities should be. We know that education, for example, is the key to the future, and we have set high educational goals for our country to reach by the year 2000. Reaching these goals is essential for our children to be able to compete effectively in the global marketplace, to dig us out of the deplorable debt which we have created for ourselves, support senior citizens in their retirement as well as their children, and maintain our country's standard of living.

Sadly, however, we are far from reaching the goal of quality education for all. More than half of the high school seniors, for example, graduate functionally illiterate. This is so shocking and so disastrous for our future that everybody ought to think seriously about it.

If you do not believe it, I note the report which came out recently—and I will have a summary of that report put in the record—which came out on March 21st, which demonstrates how our businesses feel about high school graduates. They do not even bother to talk to them. They say, "We do not even bother to interview them anymore." One, high school graduates do not even know how to interview, and two, they do not have the skills necessary to be employed.

[Summary of Census Bureau survey may be found in the appendix.]

Senator **Jeffords**. Now, if we just continue to observe these statistics passively not do anything, it is sad.

This next chart is the one which scares me most of all, and yet people do not believe it. The jobs of the future, the jobs now, require skills much greater than the skills of the past, where you were merely running a machine and pushing buttons. The jobs now, in the Information Age, require math knowledge for everyone, not just a few.

Look at this chart [C-may be found in the appendix], now 1991, it is now 1991 because that is the most recent test that showed China—the world leader in math education. If you look—this is the one that shakes my people up the most—China is by far ahead of all the others on the averages for their test results with respect to math and science. This is a math chart.

My point is that this gap is widening. In other words, the skill levels in mathematics have not been getting better here at home. We have not been catching up, as some would think. Sure, we are improving in some ways, but we are improving at a lesser rate than the other nations.

While our international competitors have risen to the challenge of quality education, they have also seized the simple but critical concept of linking school to work. The relationship between school and work in Japan, for example, is much more formal than in the United States. Most Japanese students find jobs directly with their schools. The process takes place in three stages. First, employers allot a certain number jobs each year to each high school; second, school professionals nominate students for each job position; and third, employers interview students directly and make their final selections. Our employers do not even bother to interview our kids anymore.

In Germany, vocational education itself is a standard approach. As early as the 6th grade, students opt for a college prep or vocational education program; school-based instruction in the vocational path, however, is substantial enough that students can re-enter a university at the completion of their vocational program and vice versa. This is a clear example of lifelong learning, which we have to learn from, one of our national education goals.

In Germany's vocational education system, students receive intensive training in industry through collaborations with business as well as a basic academic curriculum.

Earlier this month, I joined Secretaries Riley and Bell in holding a day-long summit to highlight the importance of education for the Nation's competitiveness in the global economy. The importance of the role of business in education was one of the keys subjects of discussion.

Also this month, the cover of Business Week asked the question, "Will Schools Ever Get Better?" The article focused on school reform efforts led by various corporations. Business has been instrumental in helping schools meet current workplace demands and maintain student interest in education, which should be the primary goals of vocational education.

Unfortunately, in the United States, misconceptions about vocational education abound. Some perceive of vocational education as a second-rate education for students who could not otherwise exceed in the "traditional academic path." Nothing, however, could be further from the truth. Vocational education courses hold appeal for all students. In a vocational high school in Baltimore, for example, I saw a film production studio built and run by the students themselves. I have also seen classes in home construction which teach students sophisticated engineering techniques. I wish that these opportunities had been open to me when I was a student.

Another misconception is that there are few similarities among Federal vocational education and job training programs, when in fact a strong vocational education program is the best kind of job training. Furthermore, job training courses should be perceived as a regular component of lifelong learning. At present, many vocational education and job training programs do exhibit extremely different educational approaches, but my colleagues, Senator Kassebaum and Representative Goodling, have each offered proposals which challenge that approach.

The extent to which vocational education and job training should be linked, though, is a primary issue for consideration, and I look forward to gaining insights into these issues today.

Vocational education is an excellent illustration of the invaluable roles the Federal, State and local governments play in our education delivery system. In my own State of Vermont, for example, Federal funds comprise 12 percent of vocational education dollars; the State provides 20 percent, and the local school districts pay 68 percent. Federal money provides the seed funding for the implementation of State and local vocational education initiatives.

We must therefore encourage and support a strong school-based infrastructure for vocational and technical education. This system provides a myriad of skills for students of all ages and the foundation for a strong and competitive work force.

In Vermont, vocational education resources are being spent on some wonderful projects which have demonstrated significant results. Last year, over 4,500 students participated in vocational education courses in 16 area centers. Twelve percent were adults, most of whom had already completed their high school course work. I am pleased that Dr. Marcia Baker, director of a technical center in Burlington, VT, is here today to tell us about some of their achievements in the area of tech-prep.

As we will hear today from Dr. Baker and other experts, communities in the United States are becoming extremely innovative in their vocational education and school-to-work agendas. We must examine this information as well as the examples from other countries and discuss structures which would replicate the most effective practices.

In this defining moment, Congress needs to act, but Members must deliberate enough to ensure that our actions will be effective in securing our Nation's future economic viability.

I intend to hold several additional hearings on these questions, and before we go forward in marking up the applicable bills.

Senator Pell, I am pleased to have you with us and would ask you for any comments you might wish to make.

OPENING STATEMENT OF SENATOR PELL

Senator PELL. Thank you very much, Mr. Chairman, and I commend you for holding this hearing.

As you said, the Federal vocational education program is perhaps the largest Federal effort in the area of secondary education. As such, its reauthorization is very vital and should be done with care and thoughtfulness.

As we begin to work on reauthorization, there are several matters that should be given priority consideration. First, to my mind, we must preserve the emphasis on the integration of academic and vocational skills. To succeed in the workplace, the individual must receive the broadest and the best education possible. This means not only a mastery of the basic skills, but also a knowledge of history, civics, and the sciences.

Second, we must continue to place a high priority on the technical-preparatory programs. This important effort links secondary education with at least the first 2 years of postsecondary education. It is an important step in achieving what we have long believed essential, namely, that we ought to be affording individuals at least 2 years of education beyond high school as a matter of right, not as a matter of privilege. This is critical if we are to adequately prepare individuals for the workplace.

Third, we should not withdraw from targeting Federal assistance to those most in need of help. In our past three reauthorizations, we have intensified our focus on meeting the needs of students who had too little access to vocational education. That effort has been particularly critical for economically disadvantaged students. While we may not have accomplished all we set out to achieve, our focus should be sharpened and not discarded. Federal vocational education programs should continue to be targeted to those of our citizens who need them the most.

Fourth, I believe our primary concern should be vocational education programs for secondary school students. There is a huge drop in Federal education at the secondary school level. Yet it is in our secondary schools that we experience the full impact of the dropout problem. To my mind, one of the best ways we can address this problem is through a vocational education program that has a strong academic component and uses the latest advances in technology.

These are four of the priorities I believe should be kept uppermost in mind as we move along with our work. The need to simplify the Federal law in vocational education is evident, but I would hope that also evident is the need to make sure that the law serves important national objectives and targets those who need vocational education services the most.

Mr. Chairman, I am also very pleased to welcome to our hearing today the Commissioner of elementary and secondary education in my own State of Rhode Island, Mr. Peter McWalters.

Thank you, Mr. Chairman.

Senator JEFFORDS. Thank you. It is a pleasure to serve with Senator Pell. We have been working together for over 20 years, and we have seen some progress, but we also know there is a lot to do. It has been a real honor to be able to work with a Senator who has done so much for education.

Our first panelist today will be Dr. Augusta Kappner, assistant secretary for vocational and adult education at the U.S. Department of Education. Dr. Kappner has held a number of distinguished positions in New York City's higher education system, both as a college president and dean of adult and continuing education.

Thank you for joining us here today, and please proceed, Dr. Kappner.

STATEMENT OF AUGUSTA KAPPNER, ASSISTANT SECRETARY FOR VOCATIONAL AND ADULT EDUCATION, U.S. DEPARTMENT OF EDUCATION, WASHINGTON, DC.

Ms. KAPPNER. Thank you very much, Chairman Jeffords and Senator Pell. I am delighted to be here and appreciate this opportunity to discuss the administration's Career Preparation Education Act, which we believe squarely addresses the issues that you have so eloquently laid out before us and the priorities that we are here to talk about today.

You have my full testimony, so I will try to be brief and summarize.

Our proposal for vocational education is built on a vision for education in which all students have the opportunity to prepare for college, for careers, and for further learning. If you can imagine a school where students have the chance to take courses organized around career major such as aviation, finance, environmental science; where students have the opportunity to learn in the classroom as well as at work sites, with instruction which integrates academic and vocational education; where as a part of their school-based studies, students work with both academic and vocational teachers, counselors and mentors on projects which are related to their career majors; where work-based learning assignments are available to reinforce and enhance what students are learning in the classroom; where employers are actively involved with schools in designing work-based learning, providing mentors, and offering opportunities for career exploration in all aspects of their industry, that is what we envision as the hopeful future for vocational education.

You can now see visions of this beginning to emerge all across the country. For example — just one example — in the tech-prep partnership which is formed between the Community College of Rhode Island in Warwick and the areas employers and over 30 of the State's public high schools, students can now pursue a coordinated course of studies in such fields as chemical technology, computer science, electronic sciences, and allied health.

Students start in their junior year in high school and complete the program with a 2- or 4-year postsecondary degree.

Last year, the Congress, with strong bipartisan support, passed the School-to-Work Opportunities Act to provide venture capital to States to restructure the learning experiences of all students. The School-to-Work Act expands on the major reforms of the 1990 Perkins Amendments and is designed for all students, including dropouts, and the college-bound high school student.

The School-to-Work Opportunities Act is not another Federal program. It is a one-time temporary investment in change and gives us a framework now for coordinating and streamlining Federal youth programs.

Let me talk more specifically of our proposal. Under our proposal, the Career Preparation Education Reform Act, we are providing funding to State and local education agencies because we know that the Federal funds must be combined with the billions of dollars in State and local education dollars which exist at the secondary school level. State and local funds clearly have to be the majority of the investment if school-to-work systems are to become available in every school. The Federal dollar is important, but it is a small part of the investment.

The Career Preparation Education Reform Act is based on the findings of the National Assessment of Vocational Education and is consistent with its recommendations. It brings academic and vocational education together, promotes business involvement in education, supports quality professional development for teachers and guidance counselors; it streamlines governance, funding and the program requirements, while at the same time creating accountability for results and strengthening school and business partnerships.

Our proposal is designed to give States and localities the flexibility to integrate vocational and academic education reforms with the broader school reform efforts that are going forward.

Our bill would encourage States to submit a consolidated plan that shows how their vocational education dollars, elementary and secondary dollar, and second-chance programs can contribute to the development of school-to-work systems and school reform.

Our bill will eliminate virtually all the set-asides for separate programs which are currently in the Perkins Act. The General Accounting Office has identified 23 set-asides and separate demonstration projects under the current law, and under our proposal, this would be consolidated into one State grant and one national program's authority.

We also reduce administrative and governance requirements. The Federal Government would no longer require States to maintain a separate State board of vocational education, or a separate State advisory council. States would be able to develop the governance structures and mechanisms for participation that meet their particular needs. The State plan would be approved by the State education agency and one or more agencies of higher education.

Our proposal also permits the Secretary of Education to grant to States waivers of requirements in selected Federal education laws in order to facilitate the development of truly comprehensive education systems.

The current Perkins Act identifies a number of populations that historically have been inadequately served by vocational education, including individuals with disabilities and educationally and economically disadvantaged students. The National Assessment of Vocational Education found that vocational education has a significant positive impact on the job prospects of disabled students, but research also shows that great discrepancies still exist between the performance and achievement of young women and young men and that other special populations of disadvantaged are lagging both in education and in employment.

Most importantly, we have learned from the NAVE that special targeting which is designed to improve the quality of services to special population students can sometimes have the opposite result. Some schools in fact have retained students in low-level courses as a way to meet the targeting requirements.

We want to reverse this trend, but to continue to get the dollars where they are most needed. Our proposal starts from the premise that we are preparing all students for success, and our bill would direct resources to areas with high concentrations of disadvantaged students and to schools and campuses with high concentrations of special populations, but not require targeting to isolated services or isolated, possibly low-end occupational concentrations.

We stress program improvement and accountability, with high achievement to high standards for all students under this legislation. Schools and colleges also need help in teacher training and other professional development activities. In both secondary and postsecondary education systems, the funds that are available for professional development are very much in short supply.

The Career Preparation Education Reform Act focuses funds on high-quality professional development as well as making these Perkins dollars available to States and local agencies to support professional development activities at the local level. We include career guidance personnel as an important part of the professionals to whom professional development activities should be targeted.

Under our proposed Act, the States would be responsible for evaluating program accomplishments based on clear, measurable standards and accountability for results. State-developed performance indicators would include a core set of indicators—student achievement to challenging State academic standards and industry-based skill standards; receipt of a high school diploma, skills certificate, or postsecondary certificate or degree; and job placement, retention and earnings, particularly in the career major area of the student.

Local agencies and States under our proposal would routinely evaluate their achievement in these areas, and would make improvements and report their progress on a biennial basis.

We in the administration are committed to helping States and communities to significantly improve the preparation for young people for careers. Educators want this and want assistance; employers want this and want assistance; and we at the Department of Education, of course, stand ready to work very closely with you and with this committee to improve what happens in preparing all of our young people for careers and further learning.

We believe that the Career Preparation Education Reform Act would be a significant step in taking us in that direction.

I will stop there and of course will be happy to answer any questions that you might have.

[The prepared statement of Ms. Kappner may be found in the appendix.]

Senator JEFFORDS. Thank you very much.

I want to commend the administration for this initiative. It is extremely useful for us to have at this time, and we are looking at it very closely.

As you noted, the School-to-Work program is jointly administered by the Departments of Education and Labor. With respect to the Career Preparation Education Reform Act, how do you anticipate that that would be administered—by the Department of Education, or jointly with the Department of Labor? What is the thinking of the administration on that?

Ms. KAPPNER. The school-to-work legislation as it was passed by the Congress is designed, as you know, to be a short-term, intensive investment in helping States to build their systems and is going forward as a partnership. Under our proposal, these dollars would go to State education agencies and higher education agencies and would be administered by the Department of Education. These are the dollars that follow behind, if you will, school-to-work dollars to the schools, to help the schools do their part of building the partnerships under school-to-work. JTPA dollars for out-of-school youth, of course, would be on the outside of schools to help make that happen.

We have built into our proposal significant ways to make sure that all of those dollars are coordinated and can be used together effectively, both at the local level in communities and at the State level under State leadership dollars. We enable States to combine these dollars in State leadership areas and at the local level.

Senator JEFFORDS. Thank you. You mentioned consolidation of existing demonstration projects and set-asides, and so on. One thing that concerns me, not only here, but in all of the various training programs that have been recommended to consolidate, is that these were set up, supposedly, to demonstrate prospects which work and that we should replicate. Yet I have not seen any evidence to give us any idea whether any of those demonstration programs worked or did not work. Do we have any information in that regard, and will we be getting any critiques on all of these programs that we are now consolidating, so that we have some advice as to whether any of them should be replicated?

Ms. KAPPNER. Yes. The Department has ongoing evaluations of many of the set-asides that exist in Perkins. There is an evaluation of tech-prep, for example, which we believe works and which we encourage under the new legislation the model of consortia between secondary and postsecondary education; we think that that is important in preparing young people for careers.

We do have reports on some of the demonstration projects, and we share those with the States as we meet with the States, and we would be happy to share with the committee information on some of the demonstrations.

One of the areas, for example, that our demonstrations have been in is the area of integrating academic and vocational education. We have learned that it is hard for the States, it is hard for communities, but there are models that are working. There are many models—career academy models, tech-prep models, applied curriculum models. I would be happy to share some of that with the committee.

Senator JEFFORDS. I would hope so, because my last inquiry indicated that there were only a few, maybe one or two out of 100 or so, where there had ever been any longitudinal study and that we have no information as to what impact these demonstration programs have had on the people who participated in them over a longer period of time.

I would like to know—and you do not have to answer today—what kind of methodology is being used to try to measure performance. Do we have records of where these individuals went, what happened to them, whether they are working, whether their training proved beneficial? Otherwise, we are just going to have to sweep all the lessons away, and the billions of dollars that were spent may have helped some individuals, but we don't know whether they ought to be replicated.

Ms. KAPPNER. In some of the models such as tech-prep, it takes a while for the young people who start in high school to come through the postsecondary systems. So many of the young people who have begun, for example, under tech-prep would just be coming through their postsecondary preparation now. But we do have information—it is difficult to do longitudinal studies. It takes a large investment of money to do longitudinal studies which actually track the young people, the individuals, over the period of time.

What we can say is that there are particular models that seem to have worked in particular settings and that they show promise for being used in other States and other communities, and that is the kind of information we can easily share.

Senator JEFFORDS. Well, I would hope we would look toward the future and have some plan to try to give us an idea of what is working and what is not working. You ask people to come in, and they say, "Oh, we know it is working." And when we ask them how they know, they say because they feel good at the end of the day, and everybody has a smile on their face, and it is wonderful. And then we spend millions and millions of dollars, and when we now get down to agreeing to putting our system in working order, we do not know how to do it.

Ms. KAPPNER. Under our proposal, under the legislation that we have just had introduced in the Senate which was introduced as S. 696, States in planning, in terms of first on the front end, to be able to get the Federal dollars, must tell us how they are going to achieve these results for young people. We have these core indicators that I mentioned in terms of academic achievement, occupational skills, high school graduation, the postsecondary piece and job piece, and we ask States as a part of the planning process under our proposal to establish measurable, quantifiable goals, which they then report back to us on a 2-year basis. That will give us the ability to have the kind of data that will really be able to say whether this approach is working.

We also intend to continue at the national level the role that we feel is appropriate for the national level, to continue research on the projects and on the States' progress in integrating these systems, and also to make sure that more data is available on career preparation under our general education statistics collection in the Department.

So I certainly agree with you that we need to know outcomes on these programs, and we think we have built into the programs more ways of getting those.

Senator JEFFORDS. Thank you.

Senator Pell?

Senator PELL. Thank you very much.

I would like to recognize if I could Betsy Brand, who worked with us in the past under the previous administration. Welcome.

The administration has not submitted separate reauthorization legislation for adult education. What is the reason for that, Dr. Kappner?

Ms. KAPPNER. We have a proposal. It is almost completed. We are hoping to be able to submit that within the next few weeks.

Senator PELL. OK.

Senator JEFFORDS. I would hope you could really hasten the process, because my instructions are to mark up the comprehensive bill and have it finished by the first of June.

Ms. KAPPNER. Yes. We are almost there. We gave high priority to the Perkins legislation, and we just need a little bit more time to be able to get to you the adult education proposal. I would be happy to talk about it, though, if you would like me to. We do have a proposal which is a streamlining proposal and which brings together several different authorities of adult education, again into a streamlined State grant and national programs authority.

Senator PELL. What does "streamlined" mean?

Ms. KAPPNER. In the adult education proposal that I am speaking of now, it means again eliminating the numerous set-asides that exist and providing those to the State in a manner which will allow them more flexibility, but will also authorize them to use those dollars for the purposes of adult basic literacy, adult secondary education, English as a second language, and family literacy, so that the numerous set-asides that exist now in the current adult education law will be rolled into one State grant. There would be a stronger emphasis in our proposal as it has developed on family literacy, but the Sates would still have the ability to carry forward their workplace literacy efforts and all of the pieces that they need to do to meet the needs of adults in their States.

Senator PELL. Isn't this moving toward the block grant?

Ms. KAPPNER. No. I think there is a significant difference between block-granting, at least as we see that term in the Department, and what we are calling "performance partnerships" under the President's proposal, in that we are moving away from individual categorical programs and the pigeonholing of those dollars, but we are moving in a direction which asks States to give us, in return for the flexibility we are giving them, a clear way of identifying the results and measuring the results that they are trying to get for the individuals they serve with the Federal dollar. And we see ourselves doing that, the Federal Government, in partnership with the States. it is very results-oriented, it has high accountability, and I would say that that is a difference from block grants, as I perceive bock grants to be.

Senator PELL. Thank you very much.

Thank you, Mr. Chairman.

Senator JEFFORDS. Senator Simon?

Senator SIMON. I thank you, Mr. Chairman, for holding the hearing, and I regret that I am going to have to be in and out.

I am concerned with streamlining, as you just mentioned. We streamlined some programs a while back and gave States this amount of money. One of the programs that we streamlined was the program for school libraries. I think it is very interesting that during the whole Depression, not a single library in this Nation closed. After we streamlined this program, just in the last few years, half of the school libraries in the State of California have closed.

I am very, very cautious—whether you call it "streamlining" or "block grants"—in fact, there is a proposal, and I would be interested in your reaction. There is a proposal that we streamline the whole Perkins Act and just take this $1.2 billion and turn it over to the States and let the States do with it as they wish. This is part of streamlining.

And I am not suggesting that we ought to keep every program that we have a set-aside for, but I am one who has to be convinced that we are going to be doing the right thing by moving in this direction.

What is the logic of what you call streamlining of certain programs? What is making that less logical than just to streamline the whole Perkins Act?

Ms. KAPPNER. I think there are many pieces which make it logical to streamline, but not to block grant. Focusing on the Perkins Act, the Perkins dollars, as has been pointed out, are a small Federal investment which combines with the dollars that exist at the State level and the level, which are in schools, and it combines with other Federal dollars to improve our schools. If that is to happen, if schools are to improve and to create good "first-chance" career preparation systems for our young people, first of all, those dollars must continue to flow to schools and colleges where those young people are to get that career preparation education, and they must be able to be used coherently, in a good way, with ESEA dollars, with Goals 2000 dollars, with School-to-Work dollars.

That is why, in our proposal, we are not proposing to block-grant. We are proposing to give flexibility in terms of within the acts, but to ensure that those dollars continue to strengthen what goes on in schools and colleges as a part of a "first-chance" career preparation system.

We have also been very clear in the proposal that States must say how they are going to do this, must establish some goals and ways to measure those goals, not just broadly for all students, but must also say, for example, how is this going to work for women who traditionally have not done as well in vocational education as men have, and at the end tell us how that is working, with some measures and some clear evaluation.

We have built into our proposal also some performance incentives both at the State level and at the Federal level. We have enabled the States to use dollars to reward excellence, to reward particularly good performance, exemplary performance, on the part of their local providers, and we have also built in that kind of performance incentive from the Federal Government to the State government in terms of allowing the Secretary of Education to hold some of those dollars to reward States that are particularly good in meeting their goals and particularly good in meeting the needs of the students in the ways in which they said that they would.

We think that we have built in the kind of clarity about the purpose of the dollars and both the incentives and the possibility of—I guess punishment is the word I am looking for; a somewhat less punitive word, if you will—that makes this a partnership and not a block grant, that has clear parameters about what the purposes of the dollars are and keeps them flowing where they need to flow.

Senator SIMON. I do favor flexibility. I think there is kind of a path from flexibility to streamlining to block grants, and somewhere between flexibility and streamlining and block grants, you get into trouble. And when you say you are going to have clarity of purpose, I am for that, but I also want accountability. And I think that that has to be built in there, too.

So I just want you to know there is at least one member of this subcommittee who is going to look at your streamlining proposals very, very carefully. I do not want to streamline ourselves into trouble, and I think that that is what we have done sometimes in the past.

Then, just one other question. I think it was 2 or 3 years ago, we revised the JTPA program, but one of the things that I heard prior to our revision and have heard since is the lack of coordination between the school programs and the JTPA program. Do you have any comments as to how we can encourage greater working together there?

Ms. KAPPNER. What the administration is proposing is to basically restructure the Vocational Education Act and to restructure JTPA, both under the school-to-work framework, using the framework the States are now building, on the assumption that those dollars will continue, and there will be the opportunity to roll out the dollars to the States and to get all States on board with building the school-to-work infrastructure and system.

What we are proposing under Perkins is that these be the dollars which help schools to be an important part of that partnership, to do the kinds of integrations, to bring in business and industry in the way that we have talked. Similarly on the JTPA side, the JTPA dollars would do that for out-of-school youth. In our proposal, to make sure that there is the kind of coordination that you allude to, we have created, number one, the possibility for States to combine those dollars both at the State level—for example, a State would be able to take its Perkins dollars, to use some of its ESEA dollars, and to use its JTPA dollars to, for instance, do professional development for all of the people who work toward preparing students and dropouts in those two systems. Local communities would be able, at the school level, at the community level, to be able to bring those dollars together and to combine those dollars the point of service delivery.

So that although the dollars would continue to flow in two streams, we have created in the Act the specific ability for States to use these dollars together to overcome those kinds of difficulties that have existed in the past.

If I could just comment on the accountability, we would really welcome the kind of look that you have described in terms of accountability, because that is extremely important to us in the administration. We think that we have in this proposal built it in, so to speak, on the front end, in the middle, and on the back end. But we certainly welcome a look at that, because that accountability is important to us. We think that that has to be the tradeoff for the increased flexibility that we are providing to the States and communities.

Senator SIMON. Thank you.

Thank you, Mr. Chairman.

Senator JEFFORDS. I just want to let you know that I agree with Senator Simon on this issue. I think there is a dynamic out there which scares me about just block-granting and depending upon the States to have the wisdom and financial resources to be able to grapple with the problems which we discussed earlier. I think there is not a State in this country which isn't finding it very difficult to finance their present educational system.

Senator PELL. If the Senator would yield for a second, I think the problem here is the word "streamline." I get these little tremors up my backbone sometimes as to does that really mean getting rid of items that we are particularly interested in.

Senator JEFFORDS. I think we are all concerned about that. The second thing is that there still is not a perception that we have a real problem out there. I went through that at the beginning, and there is still the belief that we are doing better in Vermont than Massachusetts, and therefore everything is fine, when we do not compare ourselves properly. If there is not a perception of a problem, then if we just give money out to somebody who is desperate, they are going to put that money where they think it ought to go, to take care of their basic needs themselves.

So I will also be looking very carefully at the accountability aspects and how we can be sure that this money is going to be used to take care of these serious national problems that we have.

I just want to let you know that. Also, I would like a better understanding of another issue. In your plan, you mention "State" but you do not tell us who in the State that is going to be. As you know, we get some rather strong arguments on that question when it comes to education funds. What is your thinking on what "State" means?

Ms. KAPPNER. Under our proposal, the dollars would flow through the State education agencies and the State higher education agencies. Since we believe that the link between the secondary and postsecondary is extremely important, and as we have seen, tech-prep has worked and has had a fair amount of success and has great promise for more success, we have been careful to build in not just the State education agency, but the State higher education agency. We think it is critical. As your chart showed earlier, young people are going to need more than a high school degree; they are going to need at least 2 years of postsecondary education for the kinds of jobs that are becoming available and for the kinds of skills that will be needed to work in jobs which previously required a much lesser level of skill.

So we have built in the postsecondary piece, too. We have used the State education agency and the State higher education agencies as the stake. As I said, we want to see these dollar work well with the other education dollars that States are investing, and we think that that will only happen if these dollars flow in that manner to schools and colleges.

Senator JEFFORDS. I just want to also give a small note of caution, at least in my mind. When we analyze the present status of our educational levels in math and science in particular, we find out that we are 2 years behind most of the European and Asian schools in reaching their standards. If we are to improve our elementary and secondary education such that we are getting to calculus in the freshman and sophomore years instead of junior and senior years, it seems to me that we must have to have an extra 2 years at school. In this case, we would spend a lot more money than if we spent more time making sure that we had standards established that would get our kids up on a par with the European and the Asian kids before they graduate.

Ms. **Kappner**. I would certainly agree with you, and as we have developed this proposal, we have tried to make it very clear that we are talking here about raising the level of what goes on in vocational education, of making certain that this in no way could be stigmatized as a second-class system, but in essence taking what we have learned, the absolute best of vocational education, combining that with high academics, and integrating that in a way that all young people come out prepared at that high level in math, at that high level in science, and with some ability to be able to negotiate the world of work which they will live in for the rest of their lives.

Senator **Jeffords**. Thank you.

Senator Kassebaum?

Senator **Kassebaum**. Thank you, Mr. Chairman.

Dr. Kappner, I am sorry I was late, and I will just say that I am a strong supporter of vocational education, and I am very appreciative of the emphasis that the Department is giving to it. Since I was not here for your testimony, I do not have any questions to ask. Thank you.

Senator **Jeffords**. Senator Pell?

Senator **Pell**. No further questions; thank you.

Senator **Jeffords**. Thank you, Dr. Kappner. We will be working very closely with you and will be looking forward to the adult education piece of the puzzle.

Ms. **Kappner**. OK. Thank you for this opportunity. I look forward to working with the committee.

Senator **Jeffords**. The members of our second panel represent the two groups authorized by Congress to study the Federal role in vocational education.

First, Dr. David Boesel is the director of the National Assessment of Vocational Education. He is also the acting director of the National Institute on Postsecondary Education, Libraries, and Lifelong Learning at the Department of Education's office for Educational Research and Improvement. Dr. Boesel has 29 years of experience designing, directing and conducting research for public policy.

Second is Phyllis Hudecki. She is the associate director of the National Center for Research in Vocational Education, and has served as the acting director since July 1994, when Charles Benson regretfully passed away. In addition to her research hat, Dr. Hudecki also has worn her Government hat as the State director of vocational education in Iowa, and her practitioner hat, as the State home economics supervisor and home economics teacher.

We welcome both of you and look forward to your testimony.

Dr. Boesel?

STATEMENTS OF DAVID BOESEL, DIRECTOR, NATIONAL ASSESSMENT OF VOCATIONAL EDUCATION, AND ACTING DIRECTOR, NATIONAL INSTITUTE ON POSTSECONDARY EDUCATION, LIBRARIES, AND LIFELONG LEARNING, OFFICE FOR EDUCATIONAL RESEARCH AND IMPROVEMENT, U.S. DEPARTMENT OF EDUCATION, WASHINGTON, DC; AND PHYLLIS HUDECKI, ASSOCIATE DIRECTOR, NATIONAL CENTER FOR RESEARCH IN VOCATIONAL EDUCATION, BERKELEY, CA

Mr. BOESEL. Thank you, Chairman Jeffords, Senator Kassebaum, Senator Pell.

I appreciate the opportunity to testify before this committee on this important subject. My remarks today will be based on the National Assessment of Vocational Education, which I conducted.

I am accompanied by Lisa Hudson, who worked with me closely on this study.

Senator Pell, I fully agree with your analysis of the United States' problems and its international competitive position and on the role of education as both part of the problem and part of the solution.

Our Nation's system of secondary education today prepares some students for the future much better than others. College prep students are doing fairly well, although there is room for improvement. Students in vocational and general education are not doing well. Earnings of college graduates have gone up over the last decade; those of high school graduates with no further education have gone down. Vocational and general track students and graduates are losing ground in a competitive global economy.

These students need to have better cognitive skills, such as the math skills that you have emphasized, because these thinking skills lead to better performance on the job, better chances of entering and succeeding in postsecondary education, and greater likelihood of obtaining and benefiting from further education over the course of a lifetime.

The National Assessment recommends concentrating on the development of these cognitive skills. We call it "front-loading," or trying to pack those cognitive skill developments into the high school years, concentrating on the development of these skills by using applied learning, deferring some occupationally specific training to the postsecondary level, and increasing participation in postsecondary education, and also by using high standards and challenging curricula for all students.

The 1990 Perkins Act recognized these needs, calling for the reform of vocational education by integrating academic and vocational curricula, developing tech-prep program to link secondary to postsecondary education, and having States develop systems of performance standards and measures for vocational programs.

How successful have these reform efforts been? We have found that the 1990 Perkins Act stimulated the development of integration and tech-prep programs. By 1993, districts receiving Perkins Grants and districts reporting Perkins' influence on their agendas were further along on their reforms than were other districts. However, integration and tech-prep initiatives tended to be small and new, to lack coherence and structure too often, and to be limited to the vocational side of the curriculum.

Nevertheless there has been marked year-to-year progress in the implementation of those programs. Full development of these reforms will take a long time, but it is well worth pursuing.

With regard to performance standards and measures, States have done a good job in developing these new systems, and local school districts are starting to implement the system.

The National Assessment found substantial evidence that when States support education reform, more reform occurs at the local level.

Now let me turn to the question of special population students. Since the 1960's, vocational education laws have provided funds for two main purposes—program improvement and supplemental services for special populations. We have talked about program improvement; now, what about special population students?

The National Assessment found that key Perkins goals in this area were being met. Funds were being targeted on districts with many special population students. Districts were recruiting these students to vocational programs. Programs receiving Perkins funds were providing more services than others.

However, the Assessment also found some disturbing changes in vocational enrollments. Enrollments had declined over a decade as higher-achieving students sought more academics, but the proportions of special populations in vocational programs had gradually increased. This tendency was most pronounced in area vocational schools, some of which were becoming special needs schools. By encouraging recruitment of special populations to vocational education programs, and providing supplemental services there, the legislation may have contributed to a growing isolation and stigmatization in some schools—outcomes radically different from the integrated education envisioned by the Perkins Act.

These findings lead to three broad recommendations. First, the new legislation should not try to balance program improvement and supplemental services to special populations. It should marshal Federal resources for reform. The interests of special population students can best be served by ensuring their full participation in the programs, rather than adding supplemental services to existing programs. We do make recommendations for those services, which I could explain later.

Second, the new legislation should encourage States to take a leading role—States to take a leading role—in reforming vocational and general education. These reforms should emphasize cognitive skills and the development of broad technical skills such as computer literacy. State reform efforts must be able to resist the pressure from local districts to allocate funds to many recipients in small packages, as has occurred in the past.

Third, the new legislation should provide a limited but definite role for the Federal Government in areas such as developing skill standards and measures, supporting the development of high-quality curricular materials through State consortia, and providing funding for professional development.

I will stop at this point, and thank you very much for the opportunity to speak to you today.

Senator JEFFORDS. Thank you, Dr. Boesel.

[The prepared statement of Mr. Boesel may be found in the appendix.]

Senator **Jeffords**. Dr. Hudecki?

Ms. **Hudecki**. Thank you, Chairman Jeffords and Senator Kassebaum. I appreciate this opportunity to share some of our experience and observations in the National Center for Research in Vocational Education.

My written testimony reflects some of the content that you covered in your opening remarks, Senator Jeffords,and I feel like what I had prepared to say is sort of pale in comparison to some of the points that you made, but it will certainly reinforce some of your thinking.

I would like to just focus briefly on a few items that we think should be continued from the current Perkins Act and new legislation that you may be considering crafting. We think there are very solid components in Perkins II, and that they should be continued.

We think that the emphasis in Perkins II on trying to restructure schools to create a continuum of educational opportunities and educational services so that students can move easily from one level to the next is a very important effort. It is not easily done. And we have conducted a lot of research, and we have also worked in technical assistance projects and other kinds of observations and experiences with local districts and colleges that are attempting to do this, and it is very, very slow.

One of the things that we recommend at this point, based on what teachers are telling us—common sense tell us all that this does not happen unless teachers are implementing it because they are who directly affect students. They need a lot of time, release time, to work together; they need curricula, they need materials, and they need a lot of help. So it is slow, but it is worth pursuing. The integration of academics and vocational education is one of the main areas where we think there is a lot of promise, although it is still very slow to evolve.

We also find that the preparation of teachers and teacher education programs need dramatic changes and need a lot of assistance to really prepare the kinds of teachers we need for the future. Otherwise, we will constantly be remediating the teaching force that is out there.

A second area where we have done a lot of work under Perkins II is in the performance measures and standards. Our center provided the technical assistance to help States implement their systems. We learned a lot along beside the States as they began that development. As David said, the original systems are pretty good given that this had not really been done before, but as the systems mature, a lot of issues will come up that will require additional kinds of help.

We have just conducted a study of the local effects of the measures and standards system on local programs, and there tends to be a lag of the implementation at the local level compared to what happens at the State level. But we believe this is a promising approach, that it can accomplish what you were talking about in trying to help develop some skills and outcomes for students.

We think it is important to focus both on academic as well as occupational skills and knowledge and that anything we do to set up outcomes should not only show some type of performance indicators, like placement and retention of students in programs, but also show that they have learned something and that they have developed some skills at whatever level they have participated in the program.

We also find in talking to local people that we really do not know how to use data once we get it. We almost tend to feel that data may be used in a punitive fashion rather than a program improvement method, and we would like to continue to do some work with the State and local levels to help them find ways to really use the data to improve programs and services to the participants once they have gotten through the system of measures and standards.

Another item we would recommend is continuing in some way as in Perkins II to target funds to areas that have high concentrations of low-income families, or students who are at risk. We are not advocating set-asides, that approach necessarily, but we are thinking that it is important in the Federal interest and Federal assessment to be sure that those populations are served by Federal funds and that they have equal access to high-quality programs. We believe that special populations, as documented in the NAVE study, are better served in high-quality programs, in the most mainstream fashion possible.

We would also like to see States given some flexibility under the Federal funds to develop technical assistance needs, curriculum activities, and professional development in a variety of capacities to meet their needs.

As we consider the streamlining, consolidation, blocking, whatever we want to call it, of Federal programs, it is really important to keep both a "first-chance" system and a "second-chance" system. We must ensure that reliance on a "second-chance" system does not become an excuse to avoid making changes in schools. Change in schools is very slow, change in education is slow, but we really cannot wait. We need to keep plugging away at it.

We are in essence, with the efforts that we have made over the last several years, particularly in Perkins II, trying to change the purpose of schooling. I do not know if you have thought about it in that context or not. That is not an easy kind of challenge, and I do not know that we necessarily have wholesale buy-in or support from the entire education community that we need to change the purpose of schooling, but that really is what we are seeking to do with some of the reform efforts that we have been involved in.

We must continue to do that, and we really appreciate the partnership with the Congress and the commitment from you to help us accomplish this.

Thank you.

[The prepared statement of Ms. Hudecki may be found in the appendix.]

Senator JEFFORDS. Well, thank you for your testimony, although I must say I get very discouraged listening to it from this perspective. We have established goals for the next century, the year 2000 is fast approaching, and yet you bring out the fact that we have incredible inertia, we have difficulties getting teachers qualified to provide—what do we do?

You have given me a rather depressing view as far as speed goes. We have businesses screaming for qualified workers. They say we are not providing them in our educational system. We had testimony in early hearings where they said they are locating offshore now, not because the labor is cheaper, but because they cannot get qualified workers to give them the kind of skills they need to be competitive.

So what do we do, and how do we speed things up? What does it take?

Dr. Boesel?

Mr. BOESEL. Senator, I think that the key is the focusing of Federal resources and the engagement of States, both State Governorships and State departments of education, on reform and on particular kinds of reform. I think it needs to focus on quality education, on high standards, on the development of these cognitive skills in students who have been too long neglected, too long regarded as kind of a second priority in the educational system.

So I think that a great deal of emphasis on applied learning, learning through applications, learning basic principles that underlie occupational procedures, is very important. Basically, I think we have got to work very hard on raising the verbal and the mathematical test scores of students outside the college prep track and to do that through applied learning. That would be the place where I would put the most emphasis.

Ms. HUDECKI. We have a number of visitors from these foreign nations where some of our industry may be relocating, who come to Berkeley to see if we have answers. And we find in sharing our frustrations with them that many of those countries are experimenting with some of the same kinds of approaches that we are. Some may be a little bit further ahead, but in general, even Germany, whose system has been touted as one of the very best, are reviewing what it is that they have and looking to see whether or not they need to make some changes.

What Dr. Boesel said, I would support. I think we would support that at the center, that we need to continue to try to develop reforms based on applied learning and contextual learning. We also feel like the use of some definition of what it is that students need to know and quantifying what a grade means—you mentioned in your opening remarks that employers do not even look at high school graduates anymore. High school transcripts do not really have that much meaning at this point. What is an "A" in math in Lexington, KY contrasted to Topeka, KS? What does an "A" mean, and does it tell you what anybody knows?

So I think we have a long way to go in terms of trying to identify some specific knowledge and specific outcomes that students should have, but you also have to keep in mind that it is a big enterprise, and it is very much locally controlled, and it is very individualized in terms of that classroom teacher and his or her knowledge.

Mr. BOESEL. One other thought on that, Senator. You have emphasized, and I emphasized in my testimony, the importance of changing and refocusing secondary education for this large group of students. However, this is a very difficult and long-term enterprise, and it is going to take a lot of stick-to-it-iveness.

In the shorter run, I think it may be more feasible to try to increase participation in postsecondary education, particularly in community colleges, which we know have a pretty good payoff in terms of occupational education and training. They are open to all. Many general and vocational track students already attend community college for some period of time. I think we want to increase that attendance, and I think we want to try to increase the graduation and completion and certification rates at the postsecondary level. I think that would in the interim help alleviate the problems.

Senator JEFFORDS. Well, I do not disagree with that. We have millions of young people out there who need additional training right now, and every year we graduate another million who need additional training. So it is depressing, but it is going to continue to be depressing unless we solve this problem. Can you identify those model schools that are producing what the businesses need? I hope there are some.

Mr. BOESEL. The career academies and the career magnets have had some pretty good research done on them. They have shown some pretty good outcomes. It is a somewhat mixed picture, but I think they are among the most promising models. And career academies are expanding pretty rapidly. We found that their number doubled between about 1991 and 1992. These are schools within schools, and we know that they increase retention, and we know that they increase achievement, at least in the first year. Results for later years are not so clear, but there is at least a good deal to work with there in those two models.

Senator JEFFORDS. The reason I ask that is because, as you know, the city of Washington is in dire straights right now, and Congress is going to have to help it. I have inherited the job as chairman of the subcommittee which has the money. And I know I speak for Senator Kassebaum and others in the Congress who feel that we have an opportunity now to focus attention on a city that ought to be the model city in the country. And what I want to know, and I am sure others do, too, is what can we take as experiences that are working in the rest of the country and see what we can do to demonstrate that it is possible to take one of the worst school systems in a city, I hate to say, that spends the most money, and see what we can do to get it to be the model for the country. We have an opportunity to do that now, and we have the ability to do that. So I need help from you and others who can say, okay, this is what you ought to do; and then we have to work with the teachers and the school board and so on and say, "Hey, let's be number one."

So I need help—we all do.

Mr. BOESEL. A couple of comments. First, there is a very good career academy in Washington at Anacostia high school. Second, the Department of Education and my office within it, the Office of Educational Research and Improvement, are actively pursuing partnerships with other educational agencies. We are in the process of working out an agreement to work with the city of Philadelphia to provide technical assistance, to provide research information to them. I am not in a position to commit my agency, but your suggestion looks like a promising opportunity for cooperation in this area as well.

So I think we do have a good deal of knowledge and a good deal of information, and we would very much like to put it to good use as quickly as possible.

Senator JEFFORDS. I talked to the President about this, and he agrees, and the Speaker of the House agrees, so with all of us agreeing, it seems to me we have a pretty good chance of trying to get something done. And if we cannot do it with that combination, I am afraid the rest of the country is in real trouble.

Ms. HUDECKI. Senator, I would like to add a comment, too. We have a network of 30 urban schools across the country, and two of those are also located in Washington, DC. We have been working with them for 3 years now, trying to set up integration of academics in voc ed and tech-prep programs. And I would have happy at another point to share that experience with you and continue maybe to broaden that across the district.

Senator JEFFORDS. Thank you.

Senator Kassebaum?

Senator KASSEBAUM. Thank you, Mr. Chairman.

I would just like to welcome some of the students who have come into the hearing room, because it is you we are talking about. I would like to ask how many of you do homework and like to do homework—maybe those are two very separate questions. [Laughter.] First, how many do homework?

[A show of hands.]

Senator KASSEBAUM. That is great. I came from a generation that had to do homework, and then we went through a period of time when students did not have to do homework, and now I think we are moving back to doing homework. But anyway, welcome, and we are glad you are here.

I would just like to say that I certainly agree with the comments that both Dr. Hudecki and Dr. Boesel have made, and I would only expand on them a bit. I know that Senator Jeffords and Senator Pell, as well as many on this committee, share my concern about education in the future; it is really the heart of everything. But I think it goes back to elementary school. We are talking about post-secondary education, and you know, I think in today's education, that is too late, to a certain extent, and we really have to begin to go back and address it earlier.

I am very supportive of a continuum of study, and I think that integration is important. As you both noted, it is sometimes easier to say it than to do it, and getting the implementation down at the local level really is not Washington's responsibility. I do not think we can do it from here. It takes a school board and parents who are dedicated to seeing it happen.

Now, maybe what your analysis does is to encourage State boards of education to be more actively involved with local boards of education. But I think you lose a lot, the more bureaucratic levels you go through. And I think parents need to understand the importance of it, as well as students.

I would just say two things. When we are talking about jobs, I am a big supporter of career counseling. Today is "Take Your Daughter to Work Day"—I think actually, it should be "Take Your Children to Work Day," having three sons and a daughter—there is probably merit to including everybody. But having been a political science major myself, and having been asked by my father what I could do with that major, and never dreaming I would be here, I do not believe we do enough early career counseling with an understanding of where the jobs are.

We get an awful lot of resumes from those with graduate degrees in political science, and there are not that many jobs, in that field. So I think having earlier career counseling, which could maybe even begin in 6th and 7th grade, could help in looking 10 years out to see where there will be openings. Teaching is one example—I do not think we do enough to encourage the best and the brightest to go into teaching. I think we should encourage enhanced professionalism for social workers. These are fields where I believe .we are going to need people with real expertise, commitment and professionalism, as well as in the crafts that we have always regarded as being specific, whether it is electronics, carpentry, construction, or plumbing. There will always be a demand in these areas. I think that we have to be practical about where we target some of our initiatives.

Now let me just close with a question about block granting and ask if you think we can do that without becoming prescriptive. Can we enhance flexibility, with some guidelines for accountability, by drawing on the expertise that is out there today? You both speak to that and address that. Obviously, some States are doing better in this area than others, but how much more can we do from here? You can take a horse to water, but you cannot force it to drink. And maybe recognizing that the States are going to be more on their own with a block grant, they may rise to the occasion. Do you think that would occur? What are your thoughts?

Dr. Hudecki? You did not speak to block grants, either one of you.

Ms. HUDECKI. Well, sort of, toward the end. I think it depends on what you want to accomplish with the funding that you are providing through the block grant, and that if you are very clear in the purpose and the response to the accountability for what it is that has been done, you can leave a great deal of flexibility to the States. But it is important to think about what it is that you are throwing into that block, and if you have too many multiple purposes, it becomes very difficult to manage, and especially at first, because it is a tremendous undertaking to get even two people to agree on something, especially an education, much less a wide spectrum of people across the State.

So I think it certainly has merit to think about it, and I think as a taxpayer, hardly anybody would argue with the logic of trying to consolidate and streamline many of the multiple Federal programs that are there, but I think you have to be somewhat cautious in thinking about what it is, first of all, you are wanting to accomplish and how many of those you are trying to toss into that mix.

Senator KASSEBAUM. I thought you made a very good point, Dr. Boesel, when you said that there needed to be a greater focus on quality education. In some ways, I think that speaks to the same point.

Mr. BOESEL. Yes, I think it is. When you raise the question of block grants, I think the issue of focus is the critical thing—can the focus be maintained through a system of block grants. I think it is very important that the focus of Federal dollars in this area be on reform, on the development of cognitive skills in the schools.

I agree with you about early childhood in the home; that is the basis for cognitive skills, and there are other ways of addressing that. But if that focus cannot be maintained somehow, our experience in looking at vocational education dollars is that pressures from local districts come along that cause the money to be allocated in very small parcels, in many districts, and it tends to lose the focus and diffuse the enterprise.

So if there can be provisions to maintain that focus on reform, then I think it is something that I would think might work.

Senator KASSEBAUM. Thank you very much. My time is up. I appreciate the testimony.

Senator JEFFORDS. I want to go back to your testimony from a different perspective and talk about the business community and the Job Training Partnership Act.

Some years ago, back in the early eighties, we created the Job Training Partnership Act, and we set up PICs in an attempt to improve the relationship between the business community and training programs. Now, we are recognizing that we have to have a better relationship with the business community and the schools, especially in the area of vocational education.

I wonder if you have examined the Job Training Partnership Act at all in your work, relative to the matters you have been studying. Do you have any recommendations for us as to how we can utilize those models, or do we start over again with some other entity at the State level to try to improve the areas we are discussing? What have you found out?

Mr. BOESEL. In the National Assessment, we were asked to look at coordination between Perkins and JTPA—and other Federal programs as well, job training and education programs—and basically, what we found was that at the local level, coordination was pretty good because local agencies, PICs, community colleges, area vocational schools, tended to work things out; they tended to strike agreements that would enable them to work together better.

There was more of a problem as you moved from the local level to the State level to the Federal level. And at the Federal level, the problem was conflicting definitions, conflicting time periods, conflicting authorities, different definitions of eligible populations, and so forth. These tended to create obstacles that local users of the funds had to find ways around and had to adjust for.

So we think that it is important that some of this overlap and some of these conflicting definitions be cleared up at the State and Federal levels. But we found a lot of examples of PICs providing funds to community colleges and disadvantaged students of one kind or another benefiting from participation in community college courses.

Now, I am not an expert on JTPA, and I do not think I can go much further with that. But with regard to business involvement, we took a close look at that, and we found that very intensive business involvement, say with apprenticeships, which require a lot of training be provided by the businesses, a log of resources, that that was pretty difficult to get started—worthwhile, but very difficult to get started. But there were a lot of other kinds of involvement that businesses could have in education through coop, through school-based enterprises, through mentoring and advising, shorter-term programs that could work pretty well. Consequently, we recommended that there be a lot of flexibility in figuring out ways to involve businesses in education.

One interesting finding was that students who found work on their own tended to benefit from this work in terms of career orientation, in terms of attendance in postsecondary education, and their grades were not hurt by this process.

So I think that one of the promising avenues here is to find ways to link work that students find on their own with the work that they are doing in school. But there is a multiplicity of ways of involving businesses. I think the school-to-work program is developing and discovering these ways, and the key is flexibility and a range of different types of involvement.

Senator JEFFORDS. Dr. Hudecki?

Ms. HUDECKI. Our center has studied JTPA in a little different context, not so much in the context of the question you were asking regarding participation of business, but more in the delivery of programs and services. First of all, we recognize that the JTPA system is really not a system of buildings and structures like schools; it really is purchasing power to purchase services, which may be those very same schools that are delivering vocational education, in many cases, community colleges, technical colleges, and area vocational schools.

We look quite a bit at the approach to remediation of basic skills, that kind of thing, used by JTPA programs for their clients, which in some ways would be the very same that would be used by our vocational schools. So I do not have really a lot of information to help you with your question about the relationship with business.

Senator JEFFORDS. I appreciate that. I am just concerned, as we start setting up a new structure with the job training programs and trying to coordinate with academics that we at least take notice of promising practices, and that we do not just forget about it or do away with it. We need some help in that regard, so I would hope that the administration could do that for us and that you could help.

Thank you.

Senator Pell?

Senator PELL. No questions. Thank you.

Senator JEFFORDS. Thank you both very much. We appreciate having you here, and we look forward to working with you.

Senator JEFFORDS. We now welcome panel 3. Learning about the effects of Federal legislation systematically is instructive for us before we begin to consider vocational education authorizing legislation.

It is also extremely important to hear from people who currently work directly in the field. Both members of our next panel have extensive experience in vocational education, especially as it relates to federally-authorized programs.

We will first hear from Dr. Marcia Baker. Dr. Baker is director of the Burlington Technical Center in the beautiful and green State of Vermont. I know that her 15 years as an English teacher and

16 years as a vocational and technical administrator have been instrumental in enabling her to develop one of the most comprehensive tech-prep programs in the Nation.

We also welcome Susan Brown, director of the Maine Youth Apprenticeship Program, who will discuss her efforts in implementing, coordinating, and expanding school-to-work in her fine State. Ms. Brown implemented a pilot apprenticeship program in 1993 which received a National Governors Association award as the "School-to-Work Transition Program of the Year." It has served as a model for other States seeking to implement school-to-work programs. That is an amazing achievement, and I look forward to hearing from you because, as you may have gathered, I am desperate for some good news and some good things to look to for models so that we can help not only the District of Columbia, but the Nation.

Dr. Baker, please proceed.

STATEMENT OF MARCIA BAKER, DIRECTOR, BURLINGTON TECHNICAL CENTER, BURLINGTON, VT; AND SUSAN BROWN, DIRECTOR, MAINE YOUTH APPRENTICESHIP PROGRAM, CENTER OF YOUTH APPRENTICESHIP, SOUTHERN MAINE TECHNICAL COLLEGE, SOUTH PORTLAND, ME

Ms. BAKER. Thank you, Senator Jeffords and Senator Pell, for inviting me to come down here today and making it possible for me to give testimony on a subject of great importance to me.

Having been both an academic and a vocational educator, I feel that I am in a unique position to judge the work of both vocational education and tech-prep. As a former English teacher, I was asked more times than I care to remember, Why do we have to study this or read that? Explaining why grammar and Shakespeare will be important to the future of teens is a much more difficult task than explaining why trigonometry is important to the layout of roof rafters for carpenters, or how basic tenets of physics are used every day by aviation mechanics. Motivation through relevance is the key to engaging students in their own educations, so important in this age of lifelong learning.

Most Americans believe that the road to success lies through the 4-year college degree. Most students are therefore counseled by their parents, guidance counselors and peers to follow this route, even though statistics have clearly shown that only about 25 percent of people in every country ever achieve the bachelor's degree. Indeed, most jobs do not even require that degree.

On the other hand, by the year 2000, it is estimated that over 70 percent of all the jobs in America will require at least some postsecondary education or training. It is no longer possible for a high school graduate, let alone a dropout, to support a family adequately on the wages available with such a limited education.

Why are so few of our secondary students urged to attend 2-year technical institutions? I believe that it is a matter of prestige, coupled with a lack of knowledge about the makeup of the modern workplace. Postsecondary education is a must, but the 4-year degree is getting to be a luxury that few can afford and that may not pay dividends for years to come.

Tech-prep is the most successful innovation that has come out of the Perkins Vocational and Applied Technology Act, in my opinion.

It sets a clear path from high school through postsecondary technical education. Combining the provisions of the School-to-Work Opportunities Act with Perkins permits schools to develop a comprehensive system that begins with career awareness for middle-school students and their parents, continues through high school years with applied academics and/or vocational education, and transitions to postsecondary education seamlessly.

At every step of the process, students are supported by knowledgeable adults. Because the material is interesting to them, they become engaged in the process of acquiring knowledge. Because it is practical and applied, it is of important to them now, rather than in some distant future time. Because the business community is a partner, opportunities for real-life experiential learning become a part of the educational process, rather than simply a vehicle for earning money to pay car insurance. It is definitely a win-win situation for students, businesses and schools alike.

Tech-prep differs from other vocational education and school-to-work programs by being inextricably tied to postsecondary training and education. It has been successful because it is a very practical answer to a pressing need in the modern workplace—the need for trained technicians who also have the basic academic and workplace readiness skills that are so necessary in today's businesses and industries.

The effectiveness of tech-prep can be improved by encouraging its acceptance by the academic community rather than by limiting it through including it in a block grant with vocational education and school-to-work.

The need for postsecondary technical training is not as apparent to everyone as it is to those of us who are engaged in education for the workplace of the future.

An additional advantage of tech-prep is that there are always points of entry for students into the workplace and into college. It is an affordable and practical alternative to the traditional route of high school to 4-year institution. It is planned, supported, realistic, particularly with 2-plus-2-plus-2 agreements are in place, which bridge the transitions from high school to technical college to university.

The Federal Government can better coordinate all forms of educational legislation by encouraging the participation of all segments of the educational and training community, including technical education, academic education, JTPA, and vocational rehabilitation, in working together for the benefit of all of our students, rather than engaging in unproductive turf wars.

The retraining of adults, those displaced by technology and those who are now receiving welfare benefits, is another facet of the same problem—how to create and maintain a viable and well-trained work force for the 21st century.

The global marketplace will turn America into a Third World economy if our workers are not on a par with those who understand the new workplace realities. Indeed, the definitive report of the Commission on the Skills of the American Workforce said it all by its title—"America's Choice: High Skills or Low Wages."

Through the vehicle of tech-prep, we are able to offer our students a viable alternative to the baccalaureate degree, one that takes into consideration their varying learning styles, fits into their desire for relevance in the educational process, and prepares them for a viable future as productive citizens of our country and of the world.

Thank you for inviting me to share some remarks with you.

Senator JEFFORDS. Thank you. We will have questions for you later.

Ms. Brown, please proceed.

Ms. BROWN. Senator Jeffords and Senator Pell, it is a pleasure and an honor for me to be here today to talk about a specific program within the school-to-work initiative which deals with many of the issues you were talking about this morning.

You have my written testimony. I have decided, after listening to all of your questions, to completely discard it and talk about the things that you have talked about today.

I am optimistic. I have 170 reasons in Maine to be optimistic, which is the number of students who are involved in our Maine youth apprenticeship program. This program begins in the junior year. Students have a rigorous process of getting involved. Someone mentioned earlier interviewing skills. These students have to interview with a business in order to be selected, so that even the students who are not selected are ahead of the game because they have had to fill out an application, a portfolio, interview—they have even had to learn how to dress for an interview.

In fact, a funny story, which Dave Lackey from Senator Snowe's office asked me to tell you this morning, is that after a series of interviews and job tours, one of the young women was selected at Blue Cross and Blue Shield, and she said, "Thank goodness that is over; I have run out of my mother's clothes." [Laughter.] But the point I am making is that she really understood that she was doing something different, that she was entering the adult world in a way she had never entered it before.

The thing I am optimistic about is that these young people are really rising to the challenge that they have been offered. We have certainly put a very strong system in place. We have safety nets under these young people, so they can hardly fail even if they want to. But we have combined rigorous workplace activity—they are in the workplace all day long, or they are in school all day long. This is different from cooperative education and industrial programs. And it is very difficult for schools; that has been the hardest part of this program, that these young people are really connecting the real world with school. They are coming back to us and saying, Now I know why I need math, and Now I know why I need English.

One of our machine tool students said, I now know why I have to have English—if I am ever going to be anything other than an entry-level worker, I have to be able to express myself in both an oral and a written fashion. That is what we are trying to accomplish, is for students to understand the importance of work.

These young people are paid a stipend by the business. The business really assumes all of the student-related costs of this program. They are our employees, but the business pays about $5,000 a year over a period of 3 years for a sum of $15,000.

The business commitment to this program has been incredible. It has been tough, as was mentioned earlier, because Maine is in a recession, and most of our major employers are cutting or maintaining the employment line. But they see the importance of being involved.

One of the reasons business likes this program so much is because it is something they can touch, they can feel, they can see the results. They have been involved in the design and implementation of this program in a way they have not in other educational initiatives. This is not just writing a check to a program. This is really helping to train the future work force.

We have looked at labor market information—I worked in the Department of Labor before I came to this job—and we know that there are trends, there are tracks, there are ways we can see which jobs are going to be the jobs of the future. We also know that the job today is not the job tomorrow, even though it is a customer service manager, or if it is a machinist in a manufacturing company; the jobs are not going to look the same. So we not only have to teach these young people skills that will help them today, but we have to teach them to be flexible so they can work also in the year 2000 or 2010 or whatever.

The students go through the 12th year, alternating school and work, and it is a big responsibility for them. The teachers who have really made this program work have modified the curriculum and have used the workplace as a laboratory, which it is. The equipment that is available to these young people in the workplace is far superior to anything even the best schools and even our technical colleges are able to provide.

These young people are guaranteed 1 year at the technical college if they are successful in their school and workplace. We recognize the value of the workplace by offering them up to 15 credit hours for having been involved in the workplace, and they get up to 17 hours of tuition-free work at one of our technical colleges.

All of these young people who were in our graduating class—the first group has gone through now—are planning to work and continue their education either at one of the technical colleges, and many of them are also planning to go on to 4-year colleges.

It is an exciting program. It really is what you are trying to get at. That is not to say we have not had enormous difficulties. One of our young people quit after 2 weeks, saying it was not "fun." We obviously need to do more work in the early grades and with career exploration.

But we credit our former Governor, John McKernan, with setting up a system that really addresses a lot of the problems we have talked about.

Thank you.

[The prepared statement of Ms. Brown may be found in the appendix.]

Senator JEFFORDS. Thank you both very much—wow—I am feeling better already. There is some hope.

My sister teaches in Maine, up in East Holden, and my niece teaches in Portland, so I have a real interest in Maine, and now I am going to come up and see you, too, and see what you are doing.

Ms. **BROWN**. Great.

Senator **JEFFORDS**. This has been very, very encouraging testimony. I would like to just ask you a couple questions.

Your testimonies have focused on tech-prep and the school-to-work programs which constitute the state-of-the-art in vocational education. Some have suggested consolidating these two programs. Is that a good idea, or a bad idea?

Ms. **BAKER**. I think they enhance one another. A good tech-prep program gives these students applied academics, which then helps them to work in the workplace. The tech-prep curriculum is more flexible than a lot of the secondary curricula, and I think they are stepping stones for each other.

Senator **JEFFORDS**. Dr. Baker?

Ms. **BAKER**. I will agree with that, Senator Jeffords, and I do think that where we have to put our time is not so much with the vocational educators as with the academic educators, to help them to understand that part of their mission, a big part of their mission, is a different mission from what they have conceived in the past, that every student is going to work eventually. Even though they might conceive that their mission is to get the student into college, and that has been one of the major missions of the high schools, eventually, that student is going to work. The high school teachers and administrators need to understand that school-to-work is indeed for all students. I think that that is the best part of school-to-work for me, is the statement that this is for all students, not just for those other students who are going to work instead of going to college.

Both of you are from rural areas, and I obviously am, too. It seems to me that it must be difficult to find enough businesses to coordinate and to work with you to be able to provide opportunities for young people. How did you do it, or is that a problem?

Ms. **BAKER**. In Vermont, we have found that the problem is not so much getting the businesses—it is getting the students who are prepared to take on this very responsible role as being very involved in their own education. I think that in America, we spoonfeed education more than is done in other countries. So that really has been the experience all over Vermont, even in the rural areas. As you know, I am from Chittenden County, where there are lots of businesses, and we have not had any problems. But even in more rural parts of Vermont, we have everywhere found more businesses that are ready to jump in and say, Yes, we want to do this, than students who are ready at the junior year in high school to say, Yes, this is the future that I am preparing myself for, and I have got to work hard to do it, and maybe I am going to be working harder than my fellow students who are just taking these courses and then working in McDonald's.

Ms. **BROWN**. We had the advantage of having our Governor really twist arms in the beginning to get our first group of business people on board. Our program was successful from the beginning, and we have people as diverse as the CEO at Blue Cross and Blue Shield and the manager and vice president at a manufacturing company willing to go on the stump all over the State to talk with us.

We have done the easy recruitment so far. We have about 100 businesses. And this is a very intensive program. It is much more difficult than businesses ever thought it would be.

I see that we are going to have a ceiling on the numbers that we can have because of the business connection, but I agree also with Dr. Baker that at this point, we also are having difficulty particularly in the manufacturing area, finding enough students who are qualified to go into that business.

Senator **JEFFORDS**. Thank you very much. I will say that I want to come up and work with both of you. Of course, in Vermont, I will anyway. But I would like to see what you are doing. I am a great fan of your Governor and his wife also, and I know he serves as the head of "Jobs for Americans Graduates," and I work with him on that program, which is the thing that made me really aware of how little we do in our schools in this country to prepare people for work. That program ought not to even be needed. I mean, it is ridiculous to think that we have to have a separate program to teach kids how to dress for an interview and how to interview and what work is all about. That just boggles my mind. But it has been the most successful program for getting kids jobs. Well, it just proves how far we have to go. Thank you very much.

Senator Pell?

Senator **PELL**. My recollection is that some years ago, there was a program where IBM gave certificates—I think it was in Vermont—to people with their high school diploma, and to get a job, you needed the IBM certificate. Is my recollection correct?

Ms. **BAKER**. I am sorry, I have only been in Vermont for 10 years. I think it must have been before then.

Senator **JEFFORDS**. I do not recollect that, but your memory is better than mine.

Ms. **BAKER**. In the years that I have been in Vermont, IBM in Essex Junction has not hired any high school graduates. Because they could get them, they were taking technical college graduates. So that is probably something that goes back several years.

Senator **PELL**. If you look at this legislation, what do you feel is most needed in Vermont and in Maine, in the way of vocational education that is not being met by the Perkins bill now?

Ms. **BAKER**. Well, as Perkins is written now, the emphasis is on special populations as against program improvement, as it was in Perkins-I. I hate to see it swing back and say it is going to be totally program improvement, because those special populations still need help, and if there are not set-asides for them, my fear is that they will not be supported. They are not being supported now by the local money that is Federal money. And it is very difficult in these tough financial times to think that the locals are going to find, in my case, it would be a couple of hundred thousand dollars, to support help for those special populations. That needs to be continued—but we also need to have funds for program improvement because that has drastically fallen off in Perkins-II.

Senator **PELL**. Ms. Brown?

Ms. **BROWN**. I believe there need to be incentives for school systems that are really doing things differently. It is very easy to maintain the status quo. "Turf" is a four-letter word in not only schools, but businesses, in terms of pointing fingers and so on. And

I am very concerned that in Maine in particular, as we are struggling through this long recession, and dollars are being cut to schools, that education is being scaled back to a point where our students are being less well-served rather than better-served. And if money can really be targeted to helping schools really look at a different way of delivering services for this particular group of young people who learn better by doing rather than those who learn better, or learn well by the more normal academic pathway.

Senator PELL. Are you familiar with the Outward Bound program in Maine?

Ms. BAKER. Yes, I am. Our students in fact participate in a part of that Outward Bound program?

Senator PELL. And then do they receive a certificate which increases the possibility of their being hired in a job?

Ms. BAKER. Our young people receive a certificate of skill mastery at the end of their 3 years, which states exactly what they can do; and in order to receive that certificate of skill mastery, they have to receive a "4," which is the highest grade on that certificate. So yes, they have a guarantee. Someone mentioned earlier that an "A" in Kansas does not mean the same thing as an "A" in another State. In Maine, and I hope eventually all over the country, the certificate of skill mastery will mean the same thing. Right now, in Presque Isle, which I know of, and in Portland, a student can transfer, and we will know exactly what that means.

Senator PELL. Good. I thank you both very much.

Senator JEFFORDS. Thank you.

Last, but far from least, is a panel of distinguished officials who will inform us about vocational education from both secondary and postsecondary perspectives.

Similar to most of our other witnesses today, each member of this panel has teaching as well as administrative experience.

Senator Pell, I believe one of those witnesses is from your great State.

Senator PELL. That is right, and I am very happy that he is here. Peter McWalters has done a fine job in our State, and I am glad he was able to join us today.

Senator JEFFORDS. Also, we welcome Dr. David Mertes, who is chancellor of the California Community College System and a member of a number of working groups serving the education commission of the State and the American Council on Education. He has also acted as a college president, dean, professor, and high school teacher in San Ramon, CA.

And finally, Dr. Roy Peters, Jr., is the State director of the Oklahoma Department of Vocational and Technical Education. Dr. Peters also serves as the chairman of the Stillwater Medical Center Board of Trustees and as a member of the Oklahoma Chamber of Commerce's board of directors, and is past president of the Oklahoma Vocational Association and the National Association of State Directors of Vocational and Technical Education.

Mr. McWalters, please proceed.

STATEMENTS OF PETER McWALTERS, COMMISSIONER, RHODE ISLAND DEPARTMENT OF ELEMENTARY AND SECONDARY EDUCATION, PROVIDENCE, RI; DAVID MERTES, CHANCELLOR, CALIFORNIA COMMUNITY COLLEGES, SACRAMENTO, CA; AND ROY PETERS, JR., STATE DIRECTOR, OKLAHOMA DEPARTMENT OF VOCATIONAL AND TECHNICAL EDUCATION, STILLWATER, OK

Mr. McWALTERS. Let me start, Chairman Jeffords and Senator Pell, by publicly acknowledging the great Senator from Rhode Island's distinguished and long leadership in the areas of education and advocacy for America's children, Senator Pell.

Senator PELL. Thank you.

Mr. McWALTERS. Senator, I too am rather tempted to answer the question that was asked even when I was not up here, about is there any good news out there, and I am hoping you meant for all of us to contribute to your having a better day.

As recently as yesterday, I had the pleasure of cutting a ribbon at one of our area vocational and technical schools that opened a learning center that was a joint venture between DuPont Industries and the State of Rhode Island where, quite simply, we made an agreement with them that we would accept their industry standards for exit performance in certain clusters within the technical schools; and by simply agreeing to do that and working with them over a 3-year period to bring it up-to-speed, they have actually invested in bringing into the technical schools the state-of-the-art technology and applications. And for anyone who does not understand what that is like in terms of State schools, it is not unreasonable and it is not unlikely to see schools actually getting hand-me-down equipment. So that if you walk into a trade school or a technical school, sometimes you are looking at things that look state-of-the-art, only to find out that in the real world, they have already been passed by. Because of this agreement, DuPont came in, and our young people are working on machines and with instrument that is ahead of what is going on, so when they exit, all 15 or 20 in the last year were instantly picked up. And this is a school that, like other technical schools, has had to deal with being given students initially that the regular system had actually counselled over there, maybe not for the right reason. But I think there are increasing examples like that of relationships with business and education that are symbols of things that work, Senator.

Let me go on to my prepared remarks. I am the commissioner of education in the State of Rhode Island. I appreciate this opportunity to testify on behalf of my State and the Nation's Chief State School Officers regarding the reauthorization of the Carl D. Perkins Vocational and Applied Technology Act of 1990.

I would like to emphasize four key points and ask that my testimony in full be made part of the record. I also submit for the record the CCSSO's recommendations on the reauthorization of the Perkins and Adult Education Acts, and our position statement on block grants to consolidate work force development and education programs.

My first recommendation is to continue the unique role of the Perkins Vocational and Applied Technology Act, which is to improve the quality and capacity of the secondary-postsecondary education system, particularly integrating academic and occupation studies to prepare students for work.

The 1990 Perkins authorization supports the development of the fundamental concepts of the school-to-work system. In Rhode Island, Perkins funds have enabled the integration of academic and occupational instruction in both school-based and work-based settings, a major focal point in our secondary education restructuring activities and our area career and technical centers. These curricular changes encourage education and business to work more closely together. The Rhode Island tech-prep program has received recognition as an exemplary effort in this Nation.

The School-to-Work Opportunities Act provides short-term venture capital to establish a nationwide framework for connecting school and employment. The Perkins Act represents long-term Federal investment in the quality and capacity of secondary and postsecondary education infrastructure to prepare for employment. Its provisions should be maintained and strengthened.

My second recommendation is that Perkins support be an integral part of State and local school improvement activities. Perkins should be linked with comprehensive programs for elementary and secondary education school reform under Goals 2000, the Improving America's Schools Act, and the School-to-Work Opportunities Act.

Goals 2000, School-to-Work Opportunities, and IASA together fundamentally redirect the focus of Federal aid to elementary and secondary education toward high expectations for all students and performance-based accountability with unprecedented flexibility. These acts reshape the Federal-State-local partnership in education. The reauthorized Perkins Act and use of Perkins funds must be closely connected with these statutes and funding streams at the Federal, State and local levels.

Career and technical education is delivered within nine regions in our State. The Perkins Act has allowed us to develop long-term planning strategies in each of these regions, tied to systemic reform, as promoted in Goals 2000, School-to-Work and IASA. Perkins has created an important dialogue and dynamic between and among communities within a region to jointly meet all learners' needs as they prepare for careers and lifelong learning.

Perkins has also created an important policy consciousness throughout Rhode Island, underscoring the need to meet all learners' needs as they prepare for careers in lifelong learning.

My third point is that the governance structure for Perkins should be linked with that of Goals 2000, School-to-Work Opportunities Act, the IASA, and any new framework for work force development programs if enacted by Congress. In each State, the Act should continue to be administered by a sole State education agency when it comes to education.

The value and leverage of the overall Federal investment in elementary and secondary and postsecondary education is lost—the leverage is lost—if Perkins resources are diverted to general aid for job training. Unlike the Job Training Partnership Act, Perkins Act funds support a "first-chance" system and preparation for the high end of the job market. Shifting Perkins funds to a "second-chance" job training system will dilute its effect.

Federal funds must be effectively linked with State and local education funds. It is imperative that any consolidation for work force preparation programs first include a specific component to support program improvement and build capacity of the vocational-technical preparation system, and second, maintain sole State education agency responsibility and accountability for that component. Each State has established constitutional or statutory responsibility for education. Federal legislation should not supersede sovereignty with regard to governance. This assures effective integration of Federal, State and local education agency resources.

A key element of the Rhode Island Department of Education's mission is to "lead and support" in order to assure that "all students achieve at high levels." The State education agency must be seen as the catalyst for education reform. I have been successful in leveraging State funds from the Department of Employment and Training's Human Resource Investment Council to augment Perkins funds to create an incentive grant process for restructuring work force development programs in our nine career and technical education regions. The SEA must maintain authority over a reauthorized Perkins.

My final point is that to assure strong statewide technical assistance in curriculum, materials, technology, professional development, and to stimulate effective regional delivery systems within the State, adequate funds must be earmarked for statewide activities.

Most Perkins funds—the CCSSO recommends 75 percent in the current law—should be allocated by formula to the local level. The balance of the Federal investment should be allocated to statewide activities where the pooled resources enable top-quality capacity building. Those States with regional delivery systems must have funds available to support and expand new curricula, personnel training and the use of technologies to benefit students served by regional centers.

Our mission of leading and supporting is tied directly to our ability to help those people closest to the learner. The most critical elements to this are professional development and curriculum development. We need to help teachers, administrators, families and the community at-large become ready and able to assure that all learners achieve at high levels. This can only happen with statewide funds and flexibility to improve these stakeholders' skills with curricula that can be delivered in a relevant, multisetting, applied fashion.

The bill that Senator Kennedy has introduced on behalf of the administration meets many of our key objectives. It aligns Perkins plans and funds with Goals 2000, School-to-Work Opportunities Act, and the IASA. It retains the central role of Perkins as an investment in quality program capacity, integration of academic and occupational curricula, and professional development.

We especially support the strong provisions of the bill which assign the responsibility for the program to State education agencies.

The realignment of the Perkins Act represents a crossroads in the support of vocational education. We need career pathways for all students that will allow us to maintain both our global competitiveness and our Nation's quality of life. Perkins needs to be viewed as our country's primary Federal initiative that bridges secondary to postsecondary education and delivers a work force prepared for high-performance work organizations.

While this hearing is focused on vocational-technical education, I emphasize that the Chief State School Officers support a key role for the Adult Education Act as a separate program and funding source. We urge that the Adult Education Act be aligned with Even Start and other critical parent literacy and education efforts, as well as used to enable adults and out-of-school youth currently in the "second-chance" system to enter quality school-to-work and re-employment programs.

Thank you for this opportunity to testify, and I will be pleased to respond to any questions.

Senator JEFFORDS. Thank you very much, Mr. McWalters.

[The prepared statement of Mr. McWalters may be found in the appendix.]

Senator JEFFORDS. Dr. Mertes?

Mr. MERTES. Thank you very much, Senator, and I appreciate the opportunity to be here. I have submitted written testimony, and I will just make some comments drawn from that testimony.

California community colleges, which I represent, enroll 1.4 million students at the present time. We have 106 colleges spread throughout the State, within commuting distance of virtually every student, so it is a major resource available to the State.

In our system, we enroll 74 percent of all of the students in higher education in California, so community colleges are the primary provider certainly of vocational education.

Of the 1.4 million, 950,000 of the students are enrolled in one or more of the 350 vocational and technical programs that we offer. In addition, this year, we have 150,000 students who are employees of companies, and they are taking their instruction on a contract arrangement at the company site. So the in-service training directly with business is a major component.

I would also emphasize that in California we have open access, which means that every citizen can enter a community college at any State of his or her life. So we have the cohort of students who are right out of high school coming to us for transfer or coming to us for preparation or entry-level skills; we have the student who is the dropout, who may have been out for several years and comes back and wants to get a skill; we have the adult who is seeking new job skills and comes back and takes two or three courses; we have the person who is employed, where we go directly to the site and train the individual on a contract arrangement with the employer.

An average age of 29 tells you that we have a huge population of continuing education students, and a group that is growing rapidly in California, as you are well aware, is people with limited English ability, so in some of the urban areas, we have huge populations of English as a second language for our students.

Relative to Perkins, California receives $115 million in Perkins funds for the current year and approximately 46 percent, or $50 million, comes to community colleges. The Perkins funds for our system represent 4 to 5 percent of our budget for vocational education. These funds are critical to us because we attempt to use them for innovative purposes. These are the dollars that come into the system that allow us to do new and different activities.

I would point out that in Perkins, tech-prep is one of our major programs. Each one of our 106 college is involved in at least one tech-prep consortium. There are over 600 high schools currently involved in those consortia and literally thousands of different businesses affiliated with the tech-prep consortia. In our view, the tech-prep activity has been one of the major components for institutional change.

In my written testimony, I have talked about a number of programs that are involved with tech-prep, the State leadership components of Perkins and basic grants. We have also looked at—and what I would like to do is briefly summarize—some issues that I think need to be considered as we look at Perkins money and the flow of money from the Federal Government to the States.

I think the number one issue that we are attempting to get at is institutional change. At the local level in our community colleges, changing an institutional mind-set that business is not as usual, but we have got to find new ways of delivering and utilizing new technologies is what we are all about. And if somehow we can take the strengths that we have already built in—and in my view, tech-prep is one of them—and build on that, that is the direction to go.

A key component is staff development—and I am talking about faculty, administrators, everyone—about the changes that are occurring around us and the need to find new ways of interacting with the different segments of education and with the private sector. The dollars coming in need to focus on institutional change, and not be an other add-on that is there and then disappears when a new kind of program is instituted.

I think at the core is accountability, and accountability based on student outcomes. We can call it "student effectiveness," "accountability"—whatever terminology, it is to find ways of measuring the effectiveness of the dollars. And I believe that the money that comes to the college—some part of it—should be an incentive for the college that is demonstrating good, high performance, their getting an advantage fiscally for doing that. We are attempting to look at new fiscal distribution systems on our basic appropriations and would recommend that we look carefully at whether or not it might be possible to do this.

The other major component of Perkins is partnerships with the private sector. I would suggest that we look at the possibility of tax incentives for business that are highly coordinated with community colleges and K-12 in tech-prep. The idea that business and education working together can have a fiscal gain will probably do more than anything else to create institutional change in the direction that has been discussed this morning.

Another component that I would put in is that if there could be some kind of benefit given to local consortia for leveraging of funds. Whatever Federal funds come in, if the local consortia can find ways of leveraging that by finding other sources of funds that are either direct or in-kind, that would be a major method of creating, in my view, institutional change.

Finally, whatever distribution mechanism is finally decided upon, I would urge strongly that we not create a new one, that we use existing distribution mechanisms at the State level that have already demonstrated their effectiveness.

I will stop there, and if there are questions, I will attempt to answer them.

Senator JEFFORDS. Thank you, Dr. Mertes.

[The prepared statement of Mr. Mertes may be found in the appendix.]

Senator JEFFORDS. Dr. Peters, please know that our hearts and feelings go out to your people. I know that Stillwater is not far from Oklahoma City, and I deeply appreciate your being able to get here to help us out today.

Mr. PETERS. Thank you very much, Mr. Chairman. I am delighted to be here, and thanks for allowing us the opportunity to tell a little bit about our system and the feelings about the importance of the work that you and your committee are doing.

Our vocational-technical system in Oklahoma provides workplace training in 53 area vocational-technical schools and 495 high schools. Additionally, we serve 13 correctional institutions with vocational-technical programs. We are also a major player in the State's economic development activities, as we train for new and expanding industries, so our tie with business and industry is extraordinarily close.

Oklahoma's vocational-technical system has a reputation for being a good one, and we think there are three primary factors that contribute to its success. One is local control, a local tax base, and third, a separate State board for vocational-technical education. These three benefits assure local autonomy, a consistent source of funding, and a focus for the system—and you have heard that word "focus" before today.

We are in the midst of great change in work force development in this country, as you mentioned in your opening remarks. If we do not adjust for business and industry, the prospects for our Nation's productivity are grim. You do not have to look much further than under the hood of your car to understand the complex skills required of today's workers. Workers today must have both skilled hands and skilled minds. Work Force training must keep in step with these rapid changes.

We in vocational-technical education must change, or a majority of our work force will be forced to settle for low-wage, low-skill jobs.

We are convinced that education cannot operate in a vacuum. The connection between education, training, and our economy must exist at all levels, and we believe that vocational-technical education is vital to the coalitions that must be forged between education and business.

We need to dispel misconceptions about vocational-technical education. Many States would surprise you with their innovation and quality. Oklahoma, for example, as with other States, has leveraged just $240,000 from a school-to-work planning grant into a multimillion-dollar partnership initiative.

We believe States must be providing services that are value-added. As a State agency, our role is to allocate the resources, provide leadership, and assure standards of excellence, and we try not to get in the way of local innovation.

We cannot fill our systems goals without collaboration. Our school-to-work initiative has led us further in the direction of systems building than ever before, forming partnerships with business, industry, common education, higher education, labor, commerce, and employment and training.

Like Mr. McWalters, yesterday I chaired a committee of higher education, elementary and secondary education, State chamber of commerce officials, the Department of Labor commissioner, who is an elected official, representatives of business and industry, who clearly demonstrated the partnership that we are talking about that must exist between our education, business and industry, and labor entities.

We believe we are headed in the right direction, and I would like to share just four short examples of ways we are changing the face of vocational-technical education in our State and I believe in our Nation.

First, we are using the school-to-work system-building model that is in place as a blueprint for our children's future. You cannot have a good school-to-work system without a high-quality vocational-technical education program that is linked to the elementary-secondary and the higher education system, as well as the partnering that takes place and was mentioned earlier.

We are also retooling our own work force. Just as business and industry work force has changed, so has the work force that we have in education. The teachers and administrators, the State staff involved, must be go through an extensive professional development retraining system if all of this is going to work.

Third, we are tracking performance measures—how are we doing; are we achieving the kinds of results; are our institutions changing; are our programs changing, and are the kinds of students we are graduating in fact changing to meet the needs of business and industry? We are doing that through a system of common standards through business-validated competencies. That is what is different about where we are now in vocational-technical education and where we have been.

We had excellent machine shop programs before, but when business and industry came in and looked at our curriculum and said, Your program might have been good for the past, but we need to make changes for the present and the future—our programs and then our institutions began to change dramatically.

We know that Congress is faced with massive decisions as it reviews funding for vocational-technical education. We want better consolidation and coordination of education and training services, but we also hope, and I believe we have heard today that you want, efficient, purposeful change, so we will not lose momentum on the things we are doing right.

What works well for us under Perkins are the broad purposes prescribed in the law. We have been able to push academic and vocational education much closer together than before.

Some of the Perkins Act is less than ideal. Planning cycles are too cumbersome and too short. Often, planning becomes a compliance activity rather than really setting direction or providing leadership. We believe, though, that the thoughts in Perkins to integrate academics are right on target. You need to remember that those cannot be legislated either at the Federal or the State level. Educators have to be taught how to think differently, how to teach differently, and integration is occurring and will occur additionally in the future because it is the right thing to do.

We have been partnering with business and industry for decades, but never like we have done thanks to the impetus of school-to-work, tech-prep, and other initiatives as outlined in the Perkins legislation. When you think about reauthorization, we think that you should remember we need flexibility, we need broad intent for work force development, we need outcome measures, we need to know where we are going, we need those coalitions and partnerships, and finally, we believe we must have strong State leadership. If we do not lead the local schools in the direction we are going, we are going to have a few isolated programs that are indeed excellent. But what this country needs is some consistency that has quality that meets the demands of our business and industry.

Thank you.

[The prepared statement of Mr. Peters may be found in the appendix.]

Senator JEFFORDS. Thank you very much, and I thank all three of you.

Let me ask you this question first, just as a matter of information. As we know, we need to change the K-12 programs in order to be up-to-speed in the skills that are needed in the work force. How has that been accomplished, or is it being accomplished, so that we do not end up, for instance, last in the averages of math and science in the world? What is going on in your States to try to ensure that we move our young people along at a faster pace on the skills in math and science that are necessary for the evolving work force?

Mr. PETERS. In our State, we have linked the work that we are doing in vocational-technical education with Oklahoma's reform effort, called House Bill 1017, common called 1017 now.

I agree with Senator Kassebaum that we must focus on those elementary grades. We were, I think record will show, a strong, strong supporter of 1017, even though there was no money directly tied to vocational-technical education. We have done that by bringing the school-to-work model down to the elementary grades and introducing and infusing career awareness activities for those elementary-age kids. Teachers like that, and good teachers have been doing it for a long time, showing students the relevance of math and science, social studies, language arts to what they are teaching.

In the middle school grades, which is an enormously important time, I believe, to save kids—lots of kids drop out in middle school, not physically perhaps, but mentally and emotionally—we have introduced a dramatically increased amount of career exploration programs. We call them "technology education." We have transformed the old high school shop programs, industrial arts programs, and used that money down at the middle school level to allow students to explore.

Finally, the work that we have been doing through Southern Region Education Board and "Making High Schools Work" has really allowed us to focus on the academic component connected to vocational-technical education, specifically applied academics. The regions for higher education have accepted applied academics to meet the entrance requirements into our university system. So we no longer have to track kids; we no longer have to talk about the noncollege-bound and the college-bound. We believe that the elimination of the general track has again allowed some focus, not just on the program or the institution, but on the student's part as well.

Senator **JEFFORDS**. Dr. Mertes?

Mr. **MERTES**. I would cite two examples of the kind of thing that is going on in the Coast Community College District. There is an integrated academics training center, and up to the present time, 400 high school and community college teachers of science, math, English and communication have been trained. That program has gone so well that we are using it as a model to put it into other areas. It is the idea that the faculty essentially, both in community colleges and in K-12, need the retraining.

State Center Community College District, which is in Fresno, has a program called the Fresno County Employment Competency Program. It has 29 high schools and the formal partnership with the chamber of commerce in each city in Fresno County, and the goal is to graduate high school students with critical skills necessary to be successful in the workplace. And it is focused on communications, math, critical thinking, work ethics and technology—computer literacy, essentially.

These two are examples—there are a number of others—but it is focusing on the fact that whether a student wants to come in for vocational education preparation or for transfer, there is a core of basic skills that are needed, and those are obviously the communications skills, the math skills, the computer literacy, the ability to work with others in the workplace. We are finding in our State that that is the activity that we are really trying to focus on.

These are both examples that have major business components in them.

Senator **JEFFORDS**. What about K through 8 and changes in their curricula to bring young people up-to-speed at a faster rate?

Mr. **MERTES**. Senator, I am really not equipped to answer that question. I certainly know of many specific cases that are occurring around the State that are pilot models. I could get you additional information from folks who could give you a better answer.

Senator **JEFFORDS**. I appreciate that.

Mr. **MCWALTERS**. Senator, as the commissioner of K-12, I think your question is actually kind of the fundamental question of what has been going on, actually for the last 10 years since "A Nation at Risk." As you know, the first response to that was to increase the input measures, more seat time, and so on. But in the State of Vermont, the issues taking place right now, in identifying the framework/content discussion, focusing on student work, bringing portfolio and performance assessment to task—that conversation, reinforced by the last few years at the Federal level, however it is played out in terms of the Federal regulatory piece, Goals 2000 has started a conversation in this country unlike anything I have experienced in my 30 years. The issue of finally admitting that the local control issue has never seriously questioned the standards issue; the fact that the "A" does not have any meaning, and it is borne out in our relationship with our economy—all of a sudden, that conversation has led to what is the standard, who is it for, and what is the purpose. Is it all children? If it is all children, then the issues of the sorting/sifting industry that we represent have to be challenged.

So in every State—yours as a leading State—the issue of identifying the standards, publicly identifying them, focusing on student work and encouraging the conversation across lines, and making sure that the assessments are hands-on, I think is something that is actually a leading activity in most States right now, and that is raising and resolving the issue of State leadership role.

You know more than I do probably right now in your own State about the frameworks, where your frameworks are, where your portfolios are, and how that has engaged your local community, finally, in both the standards and all-child discussion at the same time.

Senator JEFFORDS. Senator Pell?

Senator PELL. Thank you, Mr. Chairman.

In Dr. Peters' testimony, he made reference to corrections education, and in that regard, I would like to note here in the hearing that there is a one percent set-aside in vocational education and 10 percent in adult education as of now. I am concerned that the moneys for this corrections education will dry up, and I think we all have to be very careful in that regard, because that will then open the door to an ever-increasing amount of recidivism, which is one of the results of not educating people when they are impressionable and in various correctional institutions.

Commissioner McWalters, you emphasize in your testimony a separate stream of funding for adult education. I think this is a good idea, but I would like to know the thought process you went through in arriving at that thought.

Mr. McWALTERS. It is a combination of things. Locally, I think there have been extremely good-faith attempts to deal with adult illiteracy and/or adult training and an increasing focus that the outcome of that should be gainful employment. However, the systems have not yet been thought through in terms of how they complement each other, and all that is meant to suggest is do not assume that training can substitute for adult basic education. However the system is put together, fundamental adult education has got to be acknowledged as a purpose and not assumed to be something that you can either bypass or not account for in your race, which is perfectly legitimate, to provide somebody readiness for gainful employment.

That is coming out of kind of a trial-and-error series of agreements where we have tried to focus on the training only to find out that you had to back up and provide straightforward, basic adult education almost as a precondition.

Senator PELL. If it is the case with Federal vocational education that resources are very limited, where would you most to want to spend those resources?

Mr. McWALTERS. In terms of the whole Act?

Senator PELL. Yes.

Mr. McWALTERS. Again, this is something—I am going to go back to an earlier word I heard here, which is "focus." In terms of what I represent, we are finally beginning to grapple with this "integration" issue. And just as we are grappling with academic and vocational integration, we are also trying to grapple with the whole vocational education world integrating with the training and business. Those are two separate systems of trying to grapple with integration.

I think the purposes statements about one of the purposes needs to continue to be focusing on the educational quality and delivery systems—this academic and vocational integration being a quality education. It is the "first-chance" system, and probably that is where I have my greatest area of emphasis. But I am perfectly understanding of—and I think you have increasing examples here—it is the issues of where these systems come together and how we force and leverage change in the core system while we are willing to share responsibility and share program development, if you will, where the systems come together, whether that is—what you heard me talk about was school site learning and work site learning. That right now is something that we are choosing to invest in in our State because we are finally at the right time and the right table where these large systems are cooperating.

But the purpose as I would emphasize in terms of the question has to do with the quality and delivery systems of the integrated education component.

Senator PELL. Thank you.

Dr. Mertes?

Mr. MERTES. I believe that much of this needs to be worked out with local initiatives. For example, we deal with large numbers of people who are unemployed in our colleges. Some of these individuals from space industry are highly educated people, and they come in and, in very quick, short-term training programs, get skills that put them right back into the workplace.

We also have the unemployed who are chronically unemployed; they have not been successful in K-12, they have not been successful since they have gotten out. They have been in training programs and just recycle back into training programs. They simply do not have the basic skills to deal with it. Those people have to be dealt with differently than the other population. If you look at all the part-timers coming back to us, you have that same kind of thing.

I would like to see the money be available to local consortia involving business and education with flexibility in how it is used.

Senator PELL. Thank you.

Dr. Peters?

Mr. PETERS. I would not necessarily go so far as to say that all the money would go to tech-prep, but the move to tech-prep is I think a very, very positive one. In terms of the emphasis on Perkins-II for special populations, as has been mentioned, it does not do any good to put a special population student in a poor vocational program, and I fear that too often happens.

The concepts behind tech-prep serve special population students, and what we need to be doing with our vocational education program certainly is improving that vocational education component. I do not argue that for a minute. We have got to focus on that, but we also have to continue linking the academic and vocational and postsecondary opportunities together. And the reason why we are so fond of this elementary and middle school component is that unless students can prepare themselves at that level, both academically and with the skills needed to make career choices, they are not going to be successful in the secondary component. So some of that direction that you have started for us with tech-prep and the school-to-work program I think should become a high priority.

Senator PELL. Thank you.

Thank you very much indeed, gentlemen.

Senator JEFFORDS. What has been suggested is that we consolidate the Perkins Act with all the Job Training Partnership Act programs into one block grant with a single funding stream. I would appreciate your comments on that.

Mr. MCWALTERS. I received as a fax yesterday a copy of Senator Kassebaum's draft, and having gotten it at about 5 o'clock last night, let me give you some quick reactions to it.

One is that it was good to see that the purpose still reinforces this issue of integration of academic and vocational. In that sense, I would support that.

Second, it acknowledges that issue of earmarking the vocational and adult piece as a legitimate component in it, and I would very much agree with that because it appeared to understand that issue of not only integrating the areas, but focusing on this is your lever into almost the K-12, first-time-through system.

On the piece about how the money is broken down, I looked at the list of consolidations, and I would have to look a little closer at how that fell out, but I did see that in the proposal, I think 50 percent of it—it would come to the State, and the policy governance would be a board, that I thought was a very reasonable attempt to bring together the systems we have been talking about.

Again, it is a version of the local flexibility issue and within that, assuming we have good State images with the right Federal levers, I thought that was a pretty good attempt at that mechanism.

Senator JEFFORDS. Have you had a chance to look at it, Dr. Mertes?

Mr. MERTES. No. I was not in my office yesterday, and it was faxed to my office, so I have not seen it, and obviously I cannot speak to it specifically.

Senator JEFFORDS. Certainly.

Mr. MERTES. I would simply add that for me it is not an issue of whether it is four or three or one. It is what is going to get accomplished when that money is actually being spent, and it is how we build in the accountability and the incentives that is the important factor. And I do not think that for me, at least, whether it is four or one is the key element. I would not be looking at that.

Senator JEFFORDS. Dr. Peters?

Mr. PETERS. I have learned some new words today—"streamlined" is better than something else and worse than other things—so I am not sure exactly which camp I am in. But I think there is great advantage to working far more closely with vocational education and JTPA.

I have always thought, for example, that some of the summer youth money in JTPA, as opposed to just putting kids in jobs, which are, I would say, almost always low-skill kinds of jobs—what if we really targeted that money to give those kids extra help and extra time that allows them to succeed in the mainstream of our education program? Those are two things we know work with special needs kids. Yet our school day is still too short, and our school year is too long, and while we might not be able to lengthen it for everybody, maybe using some of that JTPA money to really get those kids in the game might be a good investment.

I have great concerns as we talk about mergers and consolidations and block grants that we lose sight of the fact that there is indeed a difference between education and training. The least fund part of all of this is the education part, and if we wanted to take the easy route in our State, we would go the training route. We would deal with adults—they are more fund, they are easier, the placements are better, they are more serious. The high school kids are just harder to work with. And if we merge, if we consolidate too far, the easy out is going to be taken, and we are going to move away from the fact that a lot of these kids who are coming through our school system are going to be community college students, but they are likely to wait until they are 29 years old. And what are they going to do in that lost decade between 18 and 29? Well, they are going to go to jail because they do not have job skills, or they are going to be on JTPA, or they are going to be welfare mothers, or they are going to be whatever.

So at the Federal level—and Senator Kassebaum's statement talks about a new office of labor and education coming together—I can tell you, labor will drive that train. They are bigger, and the shorter-term results are easier to show. But the pitch you are making to us is that this country is in trouble, and we have got to invest in the preparation of our work force. And the way you invest in that is to reach these kids when they are in elementary school and in middle school and in high school. I think we have got to really focus on that population if we want the country of country we want for our kids and grandchildren.

Senator JEFFORDS. Otherwise there is no end.

Mr. PETERS. That is right. We are always pouring money back and back.

Senator JEFFORDS. Can you describe the efficacy of the performance measures and standards that your various States have put in place as a requirement of the Perkins Act, the 1990 authorization? Could you describe the steps which are taking place specifically to reach these goals in each of your States?

Mr. PETERS. They are pretty good. I mean, the standards are pretty good. We have targeted the placement standard. Obviously, we believe in placement and particularly in job-related placement, and we allow full credit given for continuing education—that is consistent when what our theme is in tech-prep. And it has caused our schools and our teachers to have to rethink some of the programs that they are offering, and that is just what it was designed to do.

I think the most difficult measure and standard we have dealt with in Perkins has been the competency gain, and it is one that is so hard to argue against, because, gosh, we ought to know where kids are and where they come out. But it has really been a difficult thing for teachers to do. It has created a lot of paperwork. We have tried to make it not a compliance activity, but rather an instructional kind of thing. But it is very, very difficult.

We have brought in over 80 industry committees to define our standards for programs in our occupational areas. That has been very positive for us. Every teacher knows the duties and tasks that students need to know for the occupations they are teaching, and we think that that is right on.

So in many of those arenas, we do not argue with those that have been established in Perkins-II, but again, we have got to have strong State leadership. We are trying to do that with less State money, not more, and to repeat myself, if we do not have strong State leadership, we are going to have a few good programs, but we are not going to have consistent quality of programs throughout our States.

Senator JEFFORDS. Mr. McWalters?

Mr. MCWALTERS. We have come at this—other than things like placement and retention, which I do not think anybody is having trouble with—it has actually been an incentive to make sure you have the longer-term retention kinds of systems in place to capture it. We have a similar experience on the issue of competencies. We have used it in two ways. One is that it brought into an integrated vocational arena that question of being explicit about what can this child so. And that was as new in that world as it is in social studies, trying to become a performance standard.

The other piece of that was that this was our vehicle to bring the business player, the SCANS-II into the same room. So it has been much more of a professional development and first cut at an integrated, applied learning outcome exercise in our State. And as convoluted as that can sound, it has been very, very dynamic. The systems tend to retreat when confronted with being more explicit, and it becomes the first time when two systems have to say, This is what our children can do, and the other system says, That is not good enough.

So it has been a very powerful impetus, but I am not ready to suggest that we gut it, and it is a question now of tracking it. It is right now much more of a dynamic causing the two conversations to come to closure, test each other, and change practice. I cannot suggest to you that it is a formula-driven answer now that we have got it, but I think it is meeting its first-round objective, which is forcing both the integrated discussion in the school and meeting the test of the partner in terms of the industry.

Mr. MERTES. I would add that I think our experience is very mixed. We have some examples that we can be very proud of and others that just have not come off well. I think that as we have looked at it, that an essential component is building in the effectiveness measures right at the beginning, building them right into the program so they are an integral part of the program, and everybody knows what the goals and the focus are.

We have had very, very good success where we have moved into a new arena and started without a lot of background, and I would cite two examples. One is environmental technology. This is an area that is opening up all kinds of jobs, not only in California, but around the country. We worked with the University of California at Davis and the Livermore National Laboratories, trained chemistry faculty in 27 of our colleges, and that program is to prepare students as environmental technologists. Because it was new, and it was done with industry and education from a top-down approach instead of the other approach, we built in the standards right with the curriculum. It was a jointly-developed curriculum with standards built in. That has now expanded to five Western States. The U.S. Department of Energy and the National Science Foundation are funding it to expand to a national consortium.

We have another program that started in southern California when the California Council of Science and Technology in our State identified that there are 400,000 potential jobs in alternate fuels for advanced transportation. We became involved, our community college became involved, with Sun Line Transit, Southern Pacific Gas, and several State agencies, to train technicians to deal with buses that had been converted to natural gas. That program, the entire curriculum, all of the standards to it, were developed jointly with the colleges and the private sector and the public utility. When that was built right into it, and now we have expanded it to five sites—four other colleges, so we have five sites—the curriculum goes in with the standards built right in, and the mechanism is there from day one to measure effectiveness. We have to go back and retrofit a lot of our programs that started long ago and have evolved and do not have the standards and the accountability built in.

Senator JEFFORDS. Thank you.

Senator Pell?

Senator PELL. No further questions, Mr. Chairman.

Senator JEFFORDS. It has been very, very helpful testimony, and I would like the opportunity to continue our dialog over the weeks ahead if you will agree to that. I will be back in touch with you.

I thank all the witnesses here today, who performed brilliantly and have given is many things to think about. I hope all of you will keep in touch with us, and I want to thank everyone.

With that, we will bang the gavel and close this hearing.

[The appendix follows.]

APPENDIX

Prepared Statement of Augusta Souza Kappner

Chairman Jeffords, Senator Pell, and Members of the Subcommittee, thank you for the opportunity to discuss our "Career Preparation Education Reform Act of 1995" and how vocational education can contribute to the development of State and local school-to-work opportunities systems for in-school youth. Our proposal is built on a vision for education in which all students have the opportunity to prepare for college, careers, and continuous learning. Vocational education is a central part of that vision.

Imagine a school where students have the chance to take courses organized around career majors, such as aviation, finance, and environmental science. Students have opportunities to learn in the classroom as well as at work sites. Instruction in both places integrates academic and vocational education. As part of their school-based studies, students work with their academic and vocational teachers, counselors, and mentors on projects related to their career majors. Work-based learning assignments reinforce and enhance what students learn in the classroom. Employers are actively involved with schools in designing work-based learning, providing mentors, and offering opportunities for career exploration in all aspects of their industry. High school coursework covers challenging academic content and is closely linked to postsecondary requirements. At the end of their studies, students receive a high school diploma and other credentials—certificates and associate degrees—that certify mastery of rigorous academic and industry-based occupational skills. When students graduate from high school, they are prepared for a range of opportunities. They may enroll in a two- or four-year college program. They may enter an apprenticeship program. They may secure entry-level employment in a career field. Students may even use their knowledge of all aspects of an industry to become entrepreneurs.

The 1990 reauthorization of the Carl D. Perkins Vocational and Applied Technology Education Act established support for certain key components of such a system: (1) integrating academic and vocational instruction; (2) strengthening the link between secondary and postsecondary education; (3) broadening the focus of vocational education from narrow occupations to career opportunities; and (4) focusing on results and accountability. Through the new Tech-Prep program and innovations in the basic State grant, Congress laid the foundation for reform. Tech-Prep has been one of the most important innovations in career preparation. Tech-Prep concepts form the basis of our proposal and of efforts to build comprehensive school-to-work systems.

As we have learned from the National Assessment for Vocational Education (NAVE), these reforms are beginning to take hold. NAVE found that districts that received Perkins dollars were more likely to actively implement reforms. As a result of Federal leadership embodied in the Perkins Act and State and local innovation, the best vocational education and TechPrep today prepares young people for the careers of tomorrow.

You can now see visions of the future beginning to emerge all over the country. For example, in the Tech-Prep partnership among the Community College of Rhode Island in Warwick, area employers, and over thirty of the State's public high schools, students can pursue a coordinated course of studies in such fields as chemical technology, computer science, electronics, and allied health. Students start in junior high school and complete the program with a two- or four-year postsecondary degree. Math and science are taught in the context of the students' career fields. High school students complete both rigorous academic and occupational coursework. High school and community college personnel are trained to assist students with career, education, and training options.

Last year, the President and Congress, with strong bipartisan support, worked to enact the School-to-Work Opportunities Act of 1994 to provide venture capital to States to restructure learning experiences for all students. The School-to-Work Act expands on the major reforms in the 1990 Perkins amendments and is designed for all students, including drop-outs and college-bound high school students.

The School-to-Work Act is not another Federal program. It is a one-time investment in change. The United States has never had a comprehensive school-to-work system. Building such a system requires reinventing vocational education in schools and colleges. It requires developing curricula that integrate academic and vocational instruction in the classroom and at the work site. It requires developing skill certificates linked to high occupational and academic standards. It requires working with employers and postsecondary institutions to identify the knowledge and skills needed to be productive workers and learners. It requires figuring out with employers

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which skills need to be taught in the classroom and which are best learned at the work site. And it involves creating new, flexible relationships between schools and second-chance programs for school drop-outs.

To build this system, States get school-to-work planning grants and then—as they are ready—apply for one-time, five-year implementation grants. Currently, eight States have received these implementation grants. Up to twenty more States will be funded this year. With continued funding, all States will have implementation grants by 1997. States and communities must use their own funds, as well as funds from the major Federal education and training programs, to sustain their systems once Federal support is phased out by the year 2001. The States with implementation grants have already begun thinking about how to link Perkins to their school-to-work systems and expect that local agencies will also. For example, Michigan has told us that it expects its school-to-work activities to build on some Perkins State technical assistance, such as curriculum development. Kentucky told us that Perkins could help support the participation of special needs students in school-to-work activities.

The School-to-Work Act gives us a framework for coordinating and streamlining Federal youth programs. The school-to-work strategies and systems that every State is developing provide the organizing principles around which the Administration has crafted the youth component of its GI Bill for America's Workers. The President proposes working with States, communities, and the private sector to restructure the primary Federal youth training and vocational education programs. To accelerate the reform of youth workforce preparation already underway in pioneering States and localities, the President proposes consolidating $2.9 billion in Federal youth programs into two funding streams—one for in-school youth, through the "Career Preparation Education Reform Act," and another through a second-chance system for out-of-school youth.

I'd like to turn now to a more specific description of our proposal.

The "Career Preparation Education Reform Act" is based on the findings of NAVE and is consistent with NAVE recommendations. It incorporates what we know about bringing together academic and vocational education. It promotes business involvement in education. It supports quality professional development for teachers and guidance counselors. And it supports the streamlining and coordination of Federal support for career education. It is also designed to address some of the problems identified by NAVE. It is designed to use Federal investments in vocational education to build school-to-work systems from the bottom up in schools and community colleges. It is designed to greatly streamline governance, funding, and program requirements while at the same time improving accountability for results, and strengthening school-business partnerships. Our proposal is designed to give States, schools, and colleges flexibility to integrate vocational education reforms with broader education reform efforts.

Vocational education has an important role to play in education reform, and our proposal would support this reform add the development of school-to-work systems in high schools and postsecondary institutions. Funds would be used for activities that promote the development of school-based, work-based, and connecting activities. Funds would be targeted to services and activities that address the needs of all students, including students who are members of special populations. Their career preparation education would challenge these students to achieve to State academic and industry=based skill standards. Funded activities would integrate academic and vocational education and support career majors that develop cognitive skills, broad technical skills, and an understanding of various aspects of industries and businesses. Funds would be used to connect classroom and work-based instruction, effectively link secondary and postsecondary vocational education, enhance career exploration and guidance, and provide school-site and workplace mentoring.

Comprehensive planning and strategies

Our bill would encourage States to submit a consolidated plan that shows how their vocational education, elementary and secondary education, and second-chance programs contribute to the development of school-to-work systems and school reforms. Coordinated planning is beginning to take place under Goals 2000 and the School-to-Work Act, and across elementary and secondary programs. For example, the State of Indiana has recently submitted its Perkins Act State plan as part of a consolidated plan. Under our proposal, once a State has an approved School-to-Work plan, that plan would guide the use of funds for career preparation education. States and communities would be able to combine funds authorized under the proposed Act with resources provided from the School-to-Work Opportunities Act, Goals 2000, and the Elementary and Secondary Education Act in order to carry out services and activities that are authorized under the proposed Act as well as the other programs. This will help States and communities develop, implement, and improve their school-to-work systems.

Flexibility and streamlining

One of the important objectives of our proposal is to streamline and simplify the Perkins Act. To that end, the bill would eliminate virtually all of the set-asides for separate programs. The General Accounting Office has identified 23 set-asides and separate demonstration projects in current law, which would be consolidated in the new Act. Under our proposal these would be consolidated into two authorities—a State grant and a national programs authority. In the State grant program, allotments for Indian programs and Native Hawaiian programs would be retained.

We also propose to reduce administrative and governance requirements. The Federal government would no longer require States to maintain a separate State Board for Vocational Education or a separate State Advisory Council. States would be able to develop governance structures and mechanisms for participation that meet their particular needs. The State plan would be approved by the State Educational Agency and one or more agencies of higher education. The State would consult widely with groups having an interest in education and training and submit the plan to the Governor for review and comment.

Our proposal permits the Secretary of Education to grant to States waivers of requirements in select Federal education laws in order to facilitate the development of comprehensive education systems. It also authorizes the Secretary of Labor to grant waivers of Labor Department rules in order to encourage the development of comprehensive youth systems.

Allotment of funds to States communities and institutions

The flow of funds to States and local agencies would not change drastically under our proposal, although it would be more targeted to youth, the disadvantaged, and local schools and postsecondary institutions.

For the State grant, we propose distributing funds based on the number of youth age 15 through 24 and the per capita income in the State. More of the State grant will be distributed to local educational agencies and postsecondary institutions than under current law—the minimum proportion of the State grant reaching local agencies would increase from 75 percent in current law to 80 percent in 1996 and 85 percent in 1998. Within the State, the bill would concentrate funds on school districts with the highest concentrations of disadvantaged students by increasing from 70 to 100 the percent of funds allocated on the basis of the Title I formula for elementary and secondary education programs. Distributions of funds to postsecondary institutions would continue to be based on the number of Pell grant and BIA assistance recipients enrolled in the institutions.

Supporting reforms

Our bill continues to support the most important vocational education reforms, including the integration of vocational education and academic education. We believe that the School-to-Work Opportunities Act establishes a framework for the integration of academic and vocational education and that the proposed Act would build on this framework.

Integration is difficult for schools and colleges. For generations, academic and vocational instructors have been separated in different departments and often in different buildings. Vocational students have been segregated. Perhaps most harmful, we have had different expectations for vocational students than for other students. This isn't fair to the students and it must end.

Another theme of the School-to-Work Opportunities Act is building employer involvement in schools and colleges. We can help facilitate more employer involvement in education at the national level; for example, employers are key members on the National Skill Standards Board. Congress created the Board in the Goals 2000 legislation to guide the creation of skill standards, which are statements of the skills employers need.

The School-to-Work Opportunities Act supports activities to increase employer involvement. School-to-work systems require engaging large numbers of employers in the education process—not just as advisors, but as teachers, mentors, and providers of work-based learning and career exploration opportunities. Federal legislation should encourage employer involvement, like the School-to-Work Opportunities Act does by requiring that industry be a full partner. Federal funding should be available to States and local agencies to forge links with their employer communities. Our proposal would do both.

The proposed Act would focus the funds retained by the States on statewide activities that complement the development of school-to-work systems. The NAVE and our own experience have revealed that statewide activities can be very effective in promoting reforms. A clear example of effective State involvement can be found in State efforts to develop Tech-Prep systems, encourage vital links between postsecondary systems and high schools, and support curriculum reforms and professional development models that can be used by schools throughout the State. States would also use these funds to improve guidance and counseling (including the use of one-stop career centers), promote equity, and expand the use of educational technology.

Special populations

Our proposal takes a new approach to meeting the needs of special populations who participate in vocational education. The Perkins Act identifies a number of populations that have historically been inadequately served by vocational education, including individuals with disabilities, and educationally and economically disadvantaged students. NAVE found that vocational education has a significant positive impact on the job prospects of disabled students. But research shows that great discrepancies still exist between participation and achievement of young women and men in both education and employment. Other special populations continue to encounter difficulties in education and employment. Most importantly, we have learned from NAVE that special targeting designed to improve the quality of services to special population students can have the opposite result. Some schools have retained students in low-level courses to meet targeting requirements.

We want to reverse this trend. Our proposal starts from the premise that we are preparing all students for success. Our bill would direct resources to areas with high concentrations of disadvantaged students, and to schools and campuses with high concentrations of special populations, but not require targeting isolated services or occupational programs within those institutions. We will stress program improvement and accountability for high achievement for all students. States will oversee and ensure that members of special populations are achieving to high standards, too, and report their achievements to the Secretary and the public. Schools, colleges, and State agencies can continue to use Perkins funds to provide supportive services to members of special populations to ensure their success.

Professional development

Schools and colleges also need help with teacher training and other professional development. In both secondary and postsecondary education systems, the funds available for professional development are in short supply. We have learned that, to be effective, professional development must be intensive, long-term, and well-designed. Effective professional development gives instructors more say in decisions and helps them develop a more comprehensive knowledge of their subject matter. Instructors conducting career preparation education—vocational and academic teachers—have additional needs: training in integrating academic and vocational education, linking secondary and postsecondary programs, managing and linking instruction to work-based learning, and maintaining expertise in their occupational areas.

The Improving America's Schools Act recognized this and made Eisenhower Professional Development program funds available for a broader range of academic subjects than its predecessor, the Eisenhower Math and Science program. It contains provisions to focus funds on intensive, high-quality training. The Career Preparation Education Reform Act would build on this by focusing funds on high-quality professional development, as well as making the Perkins funds available to States and local agencies to support professional development activities. Career guidance personnel would be an important target of Perkins Act professional development. Students need up-to-date information about the labor market and the skills and education required to enter various occupations. In the fast-changing labor market, guidance and counseling personnel need on-going professional development to provide these services effectively.

Quality: Evaluation and accountability

Under the proposed Act, the States would be responsible for evaluating program accomplishments based on clear, measurable standards and accountability for results. State-developed performance indicators would include a core set of indicators: student achievement to challenging State academic standards and industry-based skill standards; receipt of a high school diploma, skills certificate, or postsecondary certificate or degree; and job placement, retention, and earnings, particularly in the career major of the student. These indicators are compatible with those currently being developed for school-to-work systems and vocational education programs. Local agencies and States would routinely evaluate their achievement in these areas, make improvements, and report their progress biennially.

The proposal creates a system of incentives for States and local agencies to achieve to high standards. Each State would be authorized to use its State leadership funds to provide financial incentives or awards in recognition of exemplary performance, measured by achievement on State indicators. In addition, beginning in 1988, the Secretary would be authorized to reserve up to 10 percent of the State grant funds for "Awards for Excellence" to States with exemplary performance on State-developed performance goals. Awards would recognize exemplary quality or innovation and exemplary services for students who are members of special populations.

National activities

We propose a streamlined program of carefully designed national research, demonstration, and technical assistance efforts to complement the development of school-to-work systems. National activities would include one or more of the following, depending on the needs of States and local institutions: support for State development of performance goals and indicators; professional development; occupational and career information; and national data on school-to-work and career preparation education. The bill would continue a national assessment, which would investigate career preparation activities in the context of school-to-work transition systems.

The proposal would also continue a center for vocational education research and technical assistance. The assistance delivered through this center is critical to the field and will become more so over time. The 1990 Perkins Act and the School-to-Work Opportunities Act ask State and local agencies to make significant changes, such as the integration of vocational and academic learning and teaching all aspects of industry, with which few educators have experience. School-to-work requires development of work-based learning experiences and classroom curriculum that builds on those experiences, also new to most schools and colleges. The Career Preparation Education Reform Act would ask local agencies to be even more innovative.

The National Center for Research in Vocational Education (NCRVE) is the source of applied research, capacity-building, and technical assistance to the field to tackle these challenges. NCRVE's support of program-level evaluation and technical assistance, such as developing models of teacher training on integrating academic and vocational education, are not available elsewhere. Its mission includes both secondary and postsecondary education and how to link the two, services to at-risk special populations, professional development, model curriculum development, and assessment of student skills. Because of its unique mission, a national center specializing in Perkins Act issues should be maintained.

All of our national activities will be closely linked with school-to-work research and evaluation, and with the work conducted by Office of Educational Research and Improvement, the Department of Labor, and the States to avoid duplication and to build on the experience and knowledge gained from these related investments.

In closing, I would like to reiterate three points. First, the school-to-work strategy provides the organizing principles around which the Administration has crafted the youth component of GI Bill for America's Workers. Second, it is the Administration's goal to consolidate $2.9 billion in Federal youth programs into two flexible grants to support the implementation of an integrated school-to-work system for in-school youth and out-of-school youth. To build on the reforms in the proposed Career Preparation Education Reform Act, the Administration is working with the relevant committees of Congress on companion legislation for Department of Labor youth programs. Third, under our proposal, every State will be able to combine its State and local resources with career preparation and other Federal funds to expand its school-to-work systems. With this encouragement and assistance, States will be able to make the school-to-work system the keystone of the Nation's investment in the workforce of the future.

The Administration is committed to helping States and communities significantly improve the preparation of young people for careers. Educators and employers want assistance in this endeavor. We at the Department of Education stand ready to roll up our sleeves and work with you to advance legislation to support significant improvements in the way we prepare youth for careers and further learning. We believe the Administration's "Career Preparation Education Reform Act" represents a significant step in that direction.

Thank you again for this opportunity to appear before you. I will be happy to answer any questions that you may have.

PREPARED STATEMENT OF PHYLLIS HUDECKI

Mr. Chairman, members of the subcommittee, thank you for inviting me to speak to you today. I am representing the National Center for Research in Vocational Education, located at the University of California at Berkeley. We are a consortium of eight institutions from across the country. These institutions are: the University of California at Berkeley, the University of Illinois, the University of Minnesota, RAND at Santa Monica, California and Washington, D.C., Teachers College at Columbia University, Virginia Polytechnic Institute and State University, the University of Wisconsin-Madison, and MPR Associates of Berkeley. We conduct applied research and technical assistance related to vocational education.

The main point I would like to make is that new federal legislation should focus on preparing people to participate in an economy and society which are increasingly learning-based. Continuous computer upgrades, explosion of the internet, increasing use of contingent labor and temporary staffing agencies, and a lean production of goods and services all contribute to increasing demand for everyone to learn all the time. More and more, the success of individuals, firms, and nations now depends on how fast we can learn.

In this learning-based economy, the traditional distinction between academic and vocational education is becoming obsolete. Some unskilled jobs remain, but fewer. In the skilled technical and service occupations which have been the traditional concern of vocational education, the changing knowledge base and relentless computerization imply that initial education and training must include more theoretical and academic content than in the past.

The need to integrate academic and vocational education was recognized by Congress in the 1990 amendments to the Carl D. Perkins Act, and in the 1994 School-to-Work Opportunities Act. This need has also been recognized in other advanced industrial countries. For example, in 1994 Japan introduced a new integrated academic and vocational curriculum into its high schools. Germany is providing more opportunity for graduates of vocational training in the well-known "dual system" to continue their education at the university level. Britain is creating vocational programs leading to "general national vocational qualifications" which will also permit grads to enter a university. Sweden has been implementing new upper-secondary curricula that combine academic studies with occupational content. Similar developments are occurring in France, Spain, Denmark, and elsewhere. As learning and production become increasingly integrated in the workplace, academic and vocational education become increasingly integrated in the schools.

In the United States, examples of new integrated academic-vocational programs at the secondary level include career academies, career clusters, and career magnet high schools. These organize the whole curriculum around a career theme, e.g., health, finance, computers, media, manufacturing, or environmental technology. Students usually learn many aspects of the industry, and engage in related employment along the way. Employers are extensively involved.

These programs are presented as options which students may choose. The students in one of these programs therefore share common interests and commitments as a group. However, the choice they make is not irrevocable. Students may switch to a different course of study while still in high school, or they may go to college and major in something entirely different.

The bottom line of these programs is that each student gets some employment-related knowledge and skill while still in high school, but also satisfies requirements for four-year college or university. Some, perhaps most, graduates of these integrated programs may choose not to attend a four-year college or university immediately after high school. But the option will remain open to them later, if they decide to change careers or are forced to do so, or if they simply want to further their education.

Evaluations have found such programs improve high school performance and graduation rate of students who were at risk of dropping out. Academically high-performing students are also attracted to these programs because they are interested in finding useful applications for what they are learning. Research on contextual learning indicates that it leads to better retention and ability to use knowledge. Learning occupational skills in high school can also help students work their way through college, as most students now do.

In addition to these benefits to college-bound students themselves, making sure that a course of study is attractive to high-achieving students also guards against stigmatization and reduction of expectations.

To summarize: up-to-date integrated education prepares each student for employment, higher education, and lifelong learning—by combining the academic and vocational curriculum, linking work-based learning to classroom instruction, and satisfying prerequisites for higher education.

Federal legislation can continue to promote this kind of practice by encouraging states and localities to develop performance measures that include each student's attainment of high academic standards, certification of employment-related knowl-

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edge and skill, and qualifications for four-year college or university. The principles of integrated academic-vocational curriculum, work-based learning tied to classroom instruction, and qualification for the next level of education or training can also be applied to programs for out-of-school youth and adults.

However, if federal funds to support school-based career preparation are combined with funds for out-of-school youth and adults, it is important to ensure that the existence of "second-chance" programs does not become an excuse to avoid making changes in the schools. Offering relevant choices within the schools is likely to be more effective than relying on out-of-school programs to remedy the consequences of school failure. This implies that, if federal support for school-based career preparation is combined in a block grant with funds for out-of-school youth and adults, there is some justification for setting a minimum on the fraction of funds that are allocated to school-based programs.

Since 1988 our Center has engaged in research and technical assistance work with states and local schools and colleges. We have used our research findings and observations from working in the field to develop a set of "Principles for New Federal Legislation". This document has been widely distributed and is available here today. The nine principles include:

1. The increasing demand for continual learning throughout the working career implies that career-related education and training programs will be most effective if they combine academic and vocational content, integrate work-based with school-based learning, and ensure that each program can lead to more advanced programs.
2. In secondary schools, all students—including those who expect to attend four-year colleges or universities, as well as students at risk of not completing high school—can benefit from having the option to pursue a career-related course of study that integrates academic and vocational content with work-based learning.
3. Postsecondary institutions should continue to broaden and deepen tech-prep and other occupational programs, combining vocational and academic content and strengthening connections with the labor market.
4. Teachers, administrators, counselors, and other staff need time and support to develop programs that meet these objectives.
5. Career-oriented information, development, and counseling services ought to be improved, expanded, and integrated into curriculum.
6. Employers must be mobilized to collaborate in providing work-related education and training.
7. Performance measures and standards should continue to be used to gauge the success of programs and guide their continuous improvement; these program measures should incorporate newly developing academic and occupational skill standards for individuals.
8. While Federal funds should be distributed in greater amounts to low-income areas, states should be encouraged to develop their own programs of technical assistance for program improvement, including the possibility of targeting funds on high-performing programs.
9. Collaboration among career-related education and training programs in different institutions, or with different funding sources, is desirable and can be facilitated if all programs adhere to the same principles, such as those stated in principle 1 above.

[Additional material may be found in committee files.]

PREPARED STATEMENT OF PETER MCWALTERS

Chairman Jeffords, Senator Pell, members of the Subcommittee. I am Peter McWalters, Commissioner of Education for the State of Rhode Island. I appreciate this opportunity to testify on behalf of my State and the Nation's chief state school officers regarding the reauthorization of the Carl D. Perkins Vocational and Applied Technology Act of 1990. I have served as Rhode Island's Commissioner of Education since 1992. Prior to becoming Commissioner, I held various positions in the Rochester School District in New York since 1970, including Superintendent for six years.

To limit my statement to the time allotted, I will emphasize just a few key points and ask that my testimony in full be part of the hearing record. I also submit for the record the recommendations of the Council of Chief State School Officers on the reauthorization of the Perkins and the Adult Education Acts, as well as our position statement on block grants to consolidate workforce development and education programs. I believe the Council recommendations on reauthorization address the several specific questions on the Perkins Act raised in Chairmen Jeffords' letter inviting me to testify.

My first recommendation is to continue the unique role of the Perkins Vocational and Applied Technology Act, which is to improve the quality and capacity of the secondary-postsecondary education system, particularly integrating academic and occupation studies to prepare students for work.

The 1990 Perkins authorization supports development of the fundamental components of the school-to-work system. Perkins funds help expand theoretical and applied learning at the school and work site through integration of academic and occupational curricula, innovative secondary-postsecondary programs, such as Tech Prep, professional development and the use of new technologies. The Act supports improved programs which serve all potential student populations and targets funds to localities serving those in greatest need of quality occupational programs.

In Rhode Island, for example, Perkins funds have enabled the integration of academic and occupational instruction in both school-based and work-based settings, a major focal point in our secondary education restructuring activities. A number of our area career and technical centers are instituting academies in medical technology, travel and tourism, and business/finance. These curricular changes create expanded opportunities for education and business to work more closely together.

The Rhode Island Tech Prep program has received recognition as an exemplary effort in the country. It represents a genuine collaborative relationship among high schools, the state education agency, and our community college system.

The School-to-Work Opportunities Act (STWOA) provides short-term "venture capital" to establish a nationwide framework for connecting school and employment. The Perkins Act represents long-term federal investment in the quality and capacity of secondary and postsecondary education infrastructure to prepare for employment. Its provisions should be maintained and strengthened. For example, a priority on the continuation of Tech Prep should be maintained, even if the separate line item authorities under the Act are eliminated. Equity and access provisions should be strengthened by the requirement of disaggregated data for traditionally underserved populations.

My second recommendation is that Perkins support be an integral part of state and local school improvement activity. Perkins should be linked with comprehensive programs for elementary and secondary school reform under Goals 2000, the Improving America's Schools Act (IASA), and to the School-to-Work Opportunities Act.

The timing of this reauthorization of the Perkins Act is key. Your deliberations follow a year during which landmark federal legislation was enacted to assist states and localities in their efforts to improve schools for the 21st Century. Goals 2000, the School-to-Work Opportunities Act, and the IASA together fundamentally redirect the focus of federal aid to elementary and secondary education and reshape the federal-state-local partnership in education. The reauthorized Perkins Act and use of Perkins funds must be closely connected with these statutes and funding streams at the federal, state and local levels. A reauthorized Perkins would assist in creating the required dynamic for these landmark pieces of legislation to come together to integrate academic and career instruction and skill development.

The new federal education legislation helps states and districts develop their own standards of expectations for all, support reform district-by-district and school-by-school to assure all students achieve the National Education Goals, and establish procedures of accountability for student progress. The new legislation is unprecedented in its flexibility, including explicit provisions for administrative streamlining and consolidation, integration. of programs and funds, waivers of federal requirements, and even demonstration of state-level authority to waive federal regulations, i.e. "superflex". Perkins funds are vital to these initiatives for school improvement and new federal-state-local partnerships.

Career and technical education is delivered within nine regions in our state. The Perkins Act has allowed us to develop long-term planning strategies in each of these regions tied to systemic reform as promoted in Goals 2000, School-to-Work, and IASA. Perkins has created an important dialogue between/among communities within regions to jointly meet all learners' needs as they prepare for careers and lifelong learning. Perkins has also created an important policy consciousness throughout Rhode Island, underscoring the need to meet all learners' needs as they prepare for careers and lifelong learning.

My third point is that the governance structure for Perkins should be linked with that of Goals 2000, the School-to-Work Opportunities Act, the IASA and any new framework for workforce development programs if enacted by Congress. In each state, the Act should continue to be administered by a sole state education agency.

The value and leverage of the overall federal investment in secondary-postsecondary education is lost if Perkins resources are diverted to general aid for job training. Unlike the Job Training Partnership Act, Perkins Act funds support a "first-chance" system and preparation for the high end of the job market. Redirection of Perkins funds to the "second-chance" job training system will dilute its effect and undercut progress in assuring high quality programs needed for 21st Century academic and occupational skill requirements.

Federal funds must be effectively linked with state and local education funds. It is imperative that any consolidation for workforce preparation programs not only include a specific component to support program improvement and build capacity of the vocational-technical preparation system, but that a sole state education agency must be responsible for administration of that component and accountable for results. Each state has established constitutional or statutory responsibility for education. Federal legislation should continue to recognize that right and not supersede state sovereignty with regard to governance. This assures effective consolidation of federal, state and local education agency resources.

A key element of the Rhode Island Department of Education's mission is to "lead and support" in order to assure that "all students achieve at high levels." The state education agency must be seen as the catalyst for education reform. I have been successful in leveraging state funds from the Department of Employment and Training's Human Resource Investment Council to augment Perkins funds to create an incentive grant process for restructuring workforce development programs in our nine career and technical education regions. The SEA must maintain authority over a reauthorized Perkins.

My final point is that to assure strong statewide technical assistance in curriculum, materials and technology, professional development, and to stimulate effective regional delivery systems within states, adequate funds must be earmarked for statewide activities.

Most Perkins funds (CCSSO recommends 75% as in current law) should be allocated by formula to the local level, especially to those areas with the highest poverty and need, on the basis of the Title I, ESEA formula. The balance of the federal investment should be allocated to statewide activities where the pooled resource enables top quality curriculum materials, technology development and targeted technical assistance. Those states with regional delivery systems must have funds available (in arrangements other than cumbersome "recovery" or grant-back methods) to support and expand new curricula, personnel training, and the use of technologies that will benefit students from the several districts served by regional centers.

As I noted earlier, our mission of leading and supporting is tied directly to our ability to help those people closest to the learner. The most critical elements to this are professional development and curriculum development. I cannot stress this enough. We need to be provided with the latitude to help teachers, administrators, families and the community at large become ready and able to assure that all learners achieve at high levels. This can only happen if we are provided with statewide funds and flexibility to improve these stakeholders' skills and competencies and equip them with curricula that can be delivered in a relevant, multi-setting, applied fashion.

I note, on behalf of Rhode Island and the Council, that Senator Kennedy has introduced a bill on behalf of the Administration that meets many of our key objectives. It aligns Perkins plans and funds with Goals 2000, the School-to-Work Opportunities Act, and the IASA. It retains and advances the central role of Perkins as an Investment in quality program capacity to enable effective school-to-work systems in the states. It advances integration of academic and occupational curricula and professional development. We especially support the strong provisions of the bill which assign the responsibility for the program to state education agencies, thereby keeping this legislation in the time-honored pattern of respecting each state's right to decide how education shall be governed and enabling linkage of Perkins funds with state and local funds intended for the same purposes.

The re-authorization of the Perkins Act represents a crossroads in support to vocational education. As presented in America's Choice: High Skills or Low Wages, we need to restructure education by developing career pathways for all students that will allow us to maintain both our global competitiveness and our nation's quality of life. Perkins needs to be viewed as our country's primary federal initiative that bridges secondary to postsecondary education, and delivers a workforce prepared for high performance work organizations.

This hearing is focused on vocational-technical education, but before closing I wish to emphasize that the chief state school officers support a key role for the Adult Education Act as a separate program and funding source. Our attached position statement urges the Adult Education Act funds be aligned with Even Start and other critical parent literacy and education efforts, as well as with education to enable adults and out-of-school youth currently in the "second-chance" system to enter school-to-work and reemployment programs of quality.

Thank you for this opportunity to testify and I will be pleased to respond to your questions.

[Additional material may be found in committee files.]

PREPARED STATEMENT OF ROY PETERS, JR.

Chairman Jeffords and members of the subcommittee, thank you for inviting me here today. Thank you also, Chairman Jeffords, for your commitment to developing our nation's workforce. I am the director of the Oklahoma Department of Vocational and Technical Education housed in Stillwater, Oklahoma. Oklahoma's vo-tech system serves the entire state of Oklahoma through its network of 53 area vocational-technical school sites, 495 comprehensive high school programs, and 13 skills centers (inmate training centers). We are also responsible for the customized training for new, existing, and expanding industry which supports our state's economic development efforts. Our 2,508 full-time and numerous adjunct instructors touch the lives of more than a quarter of a million Oklahomans annually. We served 191,261 adult students and 107,894 secondary students in 1993-94. With a state population of approximately. 3.2 million, we train or retrain about nine percent of our state's population annually. The mission of our system is to "prepare Oklahomans to succeed in the workplace." We believe we are making great strides in fulfilling this mission.

WHY WE MUST CHANGE

Even though we have a very successful vocational system in Oklahoma, let me begin by explaining why we need to change the educational system in the United States. We are in the midst of great change in workforce development in Oklahoma, as we are in the entire United States. You don't have to look any farther than under the hood of your car to understand the complex skills required of today's workers. As technology continues to change at a rapid rate, training must keep in step. The workplace of today and tomorrow requires skilled minds and hands. The American worker is being asked to solve complex problems, to work in teams, to calculate and keep track of data, and to read and make decisions. The prospects for a young person in our nation today are grim. A neglected majority of our youth are losing out in the job market, and many are forced to settle for low-wage, low-skilled employment.

Neither technical nor academic education can perform in a vacuum—students need higher levels of academic skills and an increased understanding of the relationship between theory and application. Cognitive scientists tell us that all students can benefit from the enthusiasm that hands-on education generates. Now, more than ever, industry needs a prepared, skilled workforce. Everything that we have come to understand about the connection between education, training, and the economy leads us to believe that education reform must take place and that vocational-technical education must be an integral part of it.

VOCATIONAL EDUCATION IN OKLAHOMA

Oklahoma's vocational education system has a reputation for being one of the best in the country. Three features contribute to our success in Oklahoma: local control, a local tax base, and a separate State Board of Vocational and Technical Education. These features provide local autonomy, a consistent source of funding, and focus for the system. I'm pleased to say, on a personal note, that we've also had consistency in leadership at the state level. Largely because of our State Board structure, we have had only three state directors since 1942. The State Board provides leadership and governance for secondary vocational programs, postsecondary technical noncollegiate programs, training for existing, expanding and new industry, and technical corrections education.

Another reason we have experienced success is because our focus has been on our people—at the state level and at the local level. If you want to create positive change, you've got do to it with and through people. A recent report from a visiting World Bank delegation sums up a very important aspect of our system.

Oklahoma . . . sports a superb training system . . . The large army of school managers and trainers does not look particularly impressive to an outsider. In fact, for those not used to the accent and local style, they look like plain country folk, not up to the task of building a high tech training system. Yet, these people have a clear sense of purpose, and they have the right attitudes to succeed . . . The lesson is clear, when the direction is defined and well understood and organizational climate favorable, ordinary people can do the right things and bloom. The remarkable fact is that the system is being built by ordinary people.

The foundation for our system—our schools and basic programs and services—has been built by ordinary people. We continue to draw on these "ordinary" people to refocus, integrate, and stretch the boundaries of our thinking.

ADDRESSING CHANGE

Our first goal was to discuss the need to change with our partners—secondary education, higher education, labor, and business and industry—through focus groups and meetings. We knew we could not do this by ourselves. In our state, vocational education has become the common link to otherwise separate educational institutions, agencies, and companies. In many cases, we are providing the initial leadership to build an unprecedented coalition of partners in order to develop a statewide School-to-Work infrastructure and support mechanisms.

Second, we are working on the pipeline of students in the educational system. We connect with our secondary partners to provide the proper career awareness and career exploration from kindergarten through the eighth grade. We help students understand about work and how they connect to it. We prefer to reach people before they are in their twenties—the age at which you find many people back in the community college system still searching for the right career. College can be a very expensive career exploration activity!

We work with the high schools to make sure all ninth-grade students have a six-year plan of study. This plan allows students to connect their academic and occupational preparation into a sequenced set of courses that will prepare them for work and for continuing their education. As they enter high school, we stress the application of academic concepts and ask our vocational students to have the same rigorous academics required of college-bound students. Today, preparing for work requires the same skills, if not much broader skills, as preparing for college.

Third, in addition to working with secondary programs, we also provide direct training for existing and new industry. This gives us a great advantage over systems in other states that deal with only one cohort. Because we touch all people along the training continuum, our services are market-driven by direct input from our customers in business and industry. Again, the recent World Bank study provides a firsthand description.

> There is one common denominator to all the training efforts in Oklahoma. The training is never offered on account of convictions or principles of educators or administrators. All the training responds to a clear demand coming from real profit-motivated enterprises and not to needs imagined by educators. Curricula are developed by industry personnel, courses are created because jobs are there and extinguished when they are not . . . One enterprise manager even said that he saw some vo-tech trainers so often in his enterprise that he thought they were his own employees.

We look at things more like a business would. The programs we offered last year won't necessarily be the same this year or next year. In fact, last year we either dropped or added eighty-five of our programs.

Last and most importantly, we see our system now and in the future as accessible to everyone. We focus our sights beyond educating the significant few. We work on the middle eighty percent. We provide programs and supplemental services to train students from all economic and educational backgrounds for quality jobs.

These efforts combine to provide a comprehensive system of workforce preparation-coordinated and led by a state agency, the Oklahoma Department of Vocational and Technical Education. In our minds, there is no other way to do this. Connecting school and work directly, through the coordination efforts of a separate state board, is what makes us successful.

THE ROLE OF THE STATE IN THE VOCATIONAL EDUCATION PROCESS

Our view of developing a quality workforce preparation system has been greatly influenced by our constant involvement with new and expanding businesses and cutting-edge management training. States must provide services that are value-added and not just regulatory. In Oklahoma, we allocate resources, provide leadership, and assure standards of excellence—and try not to get in the way of local innovation!

We know we cannot expect to fulfill our system's goals without collaboration. Partnerships with common education, higher education, the Department of Commerce, employment and training, labor, our customers in business and industry, and the federal government are fundamental. School-to-Work has pushed us further in that direction than ever before.

Our technical assistance and service, coordinated by a single state agency, are provided in many different ways. You may be interested in some specific examples of things that are working well. We are headed in the right direction in Oklahoma. We do not want federal changes that would interfere with this momentum.

- School-to-Work is the blueprint for our children's future and has become a major educational initiative in Oklahoma. We are redirecting our human and financial resources to develop methods for infusing School-to-Work throughout the agency and across Oklahoma's K-14 educational system. Design elements of School-to-Work include accessibility for all students, career awareness, career exploration, a six-year plan of study, integrated academic and vocational education offerings, articulated secondary and postsecondary programs, and industry-recognized portable skill certificates.

- Extensive market research formed the basis for the development of Oklahoma's School-to-Work initiative. For example, in a recent 500-sample phone survey, 94 percent of Oklahoma parents surveyed think that high schools should spend more time on career information opportunities. Over 90 percent of high school parents surveyed think that work-site learning would help students gain a sense of responsibility, give them a sense of pride, and give them a better chance of getting a job.

- Tech Prep has been the impetus for increased articulation between secondary and postsecondary education. In 22 Tech Prep consortia we have connected elementary and secondary schools, area vo-tech schools, community colleges, and state universities to provide integrated courses of study that prepare students to obtain an associate degree, a two-year certificate, or to directly enter the workforce—better prepared to be competent employees.

- A three-year credit union youth apprenticeship program allows students to receive high-performance workplace training, national credentialing from the Credit Union National Association, on-site work experience, and educational opportunities beyond high school. This program is run by a partnership of the state vo-tech agency (our Business Education Division), Oklahoma credit unions, the Oklahoma Credit Union League, higher education (Rose State College), area vocational schools (Eastern Oklahoma County AVTS), and common education (school systems in the local service area).

Ms. Shirley McConnell, CEO, Oklahoma Federal Credit Union, Oklahoma City, cites this program's success: "Through linkages such as the credit union initiative, our nation will be better able to support itself by producing capable workers that add to the value of their communities, not take from them."

- We are implementing a statewide professional development system to address and support diversity in our system, develop a comprehensive instructional management program, strengthen education and industry relationships, establish quality initiatives and training for teachers and administrators, and focus on competency-based education. Just as a company retrains its workforce, so should we.

- Experts tell us that secondary and adult students have a much better chance of being successful if they are adequately assessed and counseled regarding career plans, are enrolled in their first program choice based on interest and aptitude, are given extra help in academic skills, are taught in a self-paced, competency-based environment, learn to current industry standards, and receive help with finding a training-related job. Therefore, we have developed quality indicators in these areas to strengthen student services and program support in our schools.

- To increase options for student success, we coordinate curriculum standards and articulation. We operate one of the largest technical instructional materials development centers in the nation. Currently, our Curriculum and Instructional Materials Center catalogues over 500 titles of electronic and print media ranging from air conditioning and refrigeration to pharmacology, from entrepreneurial skills to employability skills, for our schools' use. We have over 30 articulation agreements in place which tie high school and community college courses together.

- We also offer competency testing services, duty/task lists, and a passport/portfolio system to our schools. This helps assure common standards of excellence among schools—standards that are recognized and validated by business and industry.

- We are establishing measures that systematically evaluate the success of our system. Our unitized management information system tracks key performance information such as student completion rates, placement rates, and program accessibility. Various studies are being conducted to evaluate economic development effects of programs, labor market outcomes, and employer satisfaction.

THE FEDERAL ROLE IN VOCATIONAL EDUCATION

Congress is faced with massive decisions as it reviews funding for vocational education. The findings in the National Assessment of Vocational Education (NAVE) suggest that "Perkins is not well designed to accomplish system building at present. "In Oklahoma, we also believe this to be true, even though we have used our Perkins dollars to complement and strengthen critical parts of our system. The operative words here are parts and system. We had to have a systemic plan in place in order for Perkins dollars to be used effectively. Without a strategic vision for the future of our system, Perkins dollars would have been only minimally effective.

Which provisions of the Carl D. Perkins Vocational and Applied Technology Education Act work well under the 1990 authorization?

Which provisions need improvement? What works well for us under Perkins are the broad purposes prescribed in the law. The push to integrate academic and vocational education helped us move the schools forward by supplying them with money to purchase materials and attend staff development sessions on this issue. The size, scope, and quality issue, even though vague, helped us to focus resources for improvement. The emphasis on special populations helped us deliver funds to problem areas. These broad objectives help set a national framework for reform and push all of us—the state and the local education agencies—to meet the same goals.

I'm sorry to say that most of the rest of the Perkins Act is less than ideal. The planning cycles are cumbersome and too detailed. Instead of providing technical assistance to actually help teachers figure out how to integrate academic and vocational education, we continue to have a monitor and check mentality in some areas brought about by the inordinate complexity of this legislation. In this respect, the planning process becomes a compliance activity only. It does not help set direction or provide leadership. We know this is a difficult situation. We face the same issues at the state level—how to provide leadership through seed money and then make sure the money is doing what we want it to do.

The statewide assessment is a great idea but very difficult to do and do well. It is simply not feasible for a state to know all of its local needs, and the assessment process requires considerable time and resources. States do, however, know their aggregate needs, and these priorities are the ones that should be addressed in the planning.

Education reform takes a long time! The major themes found in Perkins are important parts of this reform. Thus, it is absolutely critical that you keep these themes intact when looking at reauthorization or new vocational legislation. In the states, we just now have the field with us on these important issues. Our teachers are just now able to integrate Perkins, School-to-Work, and Tech Prep. We have worked hard in Oklahoma to meet the intent and letter of all this legislation. We must not be forced to change direction.

How can schools better integrate traditional academics and vocational education?

Integration cannot be achieved through textbooks and state and federal mandates alone. We must provide the time, information, and opportunity for teachers to work together. Teachers will then learn to think differently about what they do and how they do it. Teacher educators must incorporate these principles into their ongoing training of both academic and vocational teachers. And finally, this focus must be built into all major education and training legislation. Vocational education has a lot to offer academic teachers and vice versa. The value of practical learning and the connection with the business community are two important pieces of the education puzzle that have been viewed as second class for quite some time. And as good as all this sounds, 70 of our teachers told us last summer that we needed to be patient. We are trying to be patient. This might be sound advice at the federal level as well.

How can the federal government better coordinate vocational education and federal legislation such as the Elementary and Secondary Education Act (ESEA), the Goals 2000 Educate America Act, the School-to-Work Act, the Job Training Partnership Act, and the Vocational Rehabilitation Act?

We have heard several things about doing consolidated planning—where all agencies that receive ESEA, Goals 2000, and School-to-Work funds write one plan. Idealistically, no one would argue with this, just as no one would argue with the intent of competency gains as required in the Perkins Act. Realistically, however, both are impossible to manage. You can't bring people together just to write a plan. It's like bringing people from different jobs together and saying, "Now you're a team"—without a common purpose. If the federal legislation does require all state vocational and training agencies to work together—which, again, no one should challenge—we think the School-to-Work system-building model is a good beginning. Make this coordination a gradual thing. Provide planning grants to jump-start this process so that we can align our systems and still keep programs and services operational. There is not one right answer that is going to work for every state. Each state is unique: You must account for this diversity at the federal level to achieve real change at the state level.

Federal legislation should provide for closer ties between vocational education and second- chance programs like JTPA, without imposing restrictions on the creativity of the states as to governance, organization, or leadership. This can, in my opinion, serve to enhance the value of both efforts. Oklahoma's area vocational-technical schools are the most frequently chosen providers of vocational education services by JTPA service delivery areas (SDA). SDAs seek a broader range of services from area vo-tech schools than from any other vendor of vocational training. If we truly want to help the hard-to-serve, we need to include other performance standards, such as skill standards and competencies, rather than rigid placement quotas and timelines. While there is clearly strong interaction between the vo-tech providers and the SDAs, there is still work to be done to improve our effectiveness.

Two additional suggestions might be useful. First, provide us with the forum to build a national consensus for a core set of outcome measures applicable to all states. Then provide national coordination and support for the information systems to support such measures. Second, develop a national, industry-driven resource establishing skill standards for a broad range of occupations. Such a resource would enable the states to supply portable credentials, secure employment for our students, and provide a better prepared workforce for industry.

How can business and industry become more involved in vocational education?

In Oklahoma, we have used business and industry representatives extensively for designing course content and standards. We have direct linkages with business and industry and are on the cutting edge of the latest trends in business development models. Industry representatives serve on our curriculum validation committees, and right now we have over 80 industry committees in active status. They write duty/task lists for occupations taught in our programs, and they set the standards for our School-to-Work occupational clusters.

How successful has the Perkins Act been in providing services for specicl student populations?

We have seen an overall improvement in the way we serve special populations. We are serving them first and better, especially in the areas of guidance and counseling. These services, as well as remedial and basic skills education services, have been expanded in many schools. On-site reviews indicate that students are now provided learning experiences in "all aspects of the industry." However, it is difficult to say that this increase in service is due exclusively to the Perkins Act; there may have been other factors as well. Our schools are getting better at identifying special students. Because parents believe there is an increasing need for their children to go to college, we are getting a different mix of students. Families are facing harder economic times, so more students are counted as economically disadvantaged. Overall, we are providing more comprehensive and inclusive services and feel good about the overall improvement we've made in providing services for special student populations.

CONCLUSION

The state and national vo-tech infrastructure, knowledge, and experience are major national resources for improving this country's education and workforce development systems. We provide quality workforce development and can respond quickly as the economy, society, and occupational mix of our nation changes and develops. Vocational and technical education is the foundation for Tech Prep and School-to-Work. Finally, vocational-technical education brings learners to the level of competency required by the workplace, defined and validated in partnership with business, industry, and labor.

When you think about reauthorization or new legislation, think about what we've described that works: Flexibility Broad general intent for workforce development. Coalitions. Partnerships Outcome measures. Strong state leadership. The federal language should create options rather than limit them.

[Additional material may be found in committee files.]

Preparing Students For the World Of Jobs

By Hedrick Smith

WASHINGTON

The pressures of global competition have spawned a variety of successful experiments in rethinking how to educate the neglected majority of our high school students — the 70 percent who will not finish four years of college.

Rethinking means new curriculums, new teaching methods, a new joining of academic skills and jobs skills and of classroom learning and work-site learning.

It means benchmarking America against the world's best systems and forging more partnerships between schools and business.

With notable successes in hand, the educational challenge today is to capitalize on our best models, to disseminate the best ideas of America's innovators and replicate them nationwide.

That effort was put on track by the last Congress, but it is in danger of being derailed by indiscriminate budget-cutting and block-grant fever in the new Congress.

That would be a major mistake. Reflect on John Torinus, a smart entrepreneur who runs Serigraph Inc., a high-tech graphics and printing business in West Bend, Wis. Mr Torinus has his eye on markets in Japan, Brazil, the Mexican industrial corridor, on customers such as Toyota and Nippondenso as well as Buick and Black & Decker.

Five years ago, Mr. Torinus was in despair. Like many employers, he could not find qualified workers coming out of local high schools. "We had illiterates," Mr Torinus says, "people who couldn't read blueprints, people who couldn't do simple decimals."

"If you want to meet the quality standards you need in international competition today," he insists, "you've got to have trained people — very well trained."

In 1991, after seeing Germany's dual education system, Mr Torinus was ready to gamble on something new — bringing the German system to Wisconsin. The experiment would take average high school kids — those turned off by school and itching to get into the work world. It was not aimed at dropouts or those bound for college.

In tandem with West Bend High School and with a former Wisconsin State School Superintendent, Bert Grover, and others, Mr Torinus and the national association of printers helped devise a world-standard curriculum, tying together academic skills and job skills — a system in which teen-agers would study part-time and work part-time, and receive pay for their work.

In 1992, Mr. Torinus's company took 11 high school apprentices into the two-year program, 8 more the next year, 10 more the third year, each at a cost of $3,600 a year.

The results were astounding. Mediocre students started making the dean's list. After they graduated, Mr Torinus hired every young apprentice he could, but several apprentices, inspired by the combination of work and study, wanted to go to college.

The Wisconsin experiment has spread to other fields insurance, banking, health, auto technology, electronics, biotechnology, engineering technology, tourism and manufacturing. First, two communities tried this approach, now it's in 30.

But it takes time and money to rewrite curriculums, retrain teachers, involve business, train industry mentors and set high standards.

And it takes seed capital to move from a few successful demonstrations to a nationwide system — not for all students but for enough to provide the backbone of the future workforce.

So last year, Congress passed the School to Work Act, authorizing $250 million a year for seven years to develop this whole new approach to higher education. States had to compete for this Federal venture capital.

The first grants were awarded to Maine, Massachusetts, New York, New Jersey, Kentucky, Michigan, Wisconsin and Oregon. In addition, 36 local areas — some middle class, some poor, some rural, some urban — received startup money.

The amounts were modest, a few million dollars per state. But it wa enough to spur communities into action and to attract more funds from states, local governments and businesses.

Another 20 states are due to ge similar seed money this year; thi will encourage innovative reform that promise handsome dividend not only for students but for indu try, which spends $30 billion a yea on remedial education.

But those new grants may neve be made. This fragile effort to mak American education more globall competitive is threatened by th block-grant, budget-cutting minds on Capitol Hill.

In its first 100 days, the Hou knocked $25 million out of the scho to work reform plan for 1995 (th Senate cut $5 million and the tw chambers must now reconcile th difference)

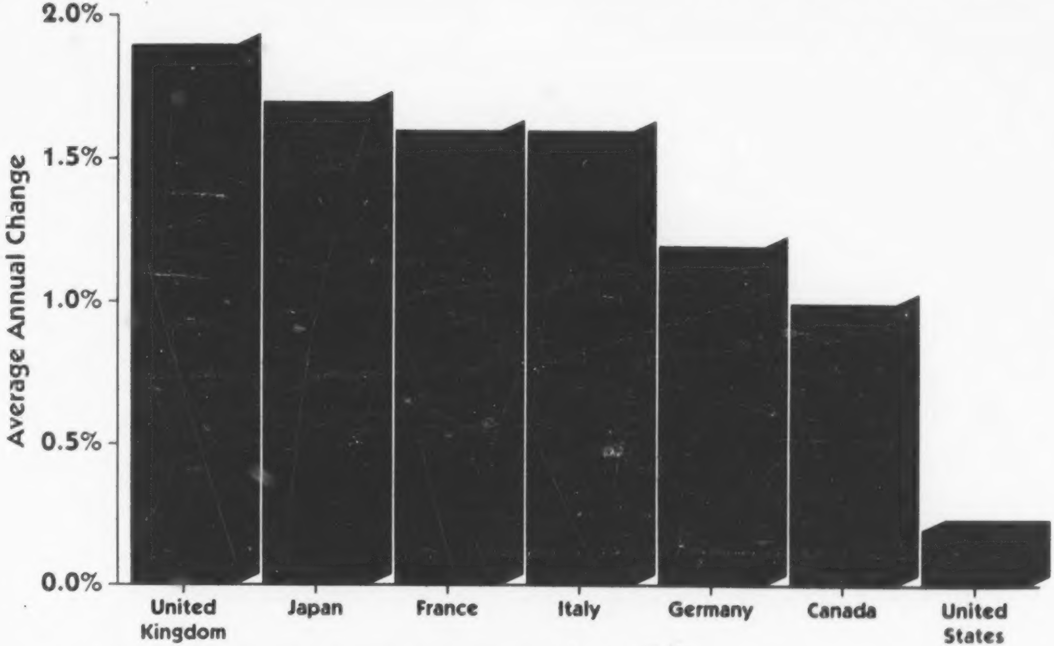
More serious cutting is threaten for 1996 during the second 100 days. John Kasich, chairman of the House Budget Committee, wants to lump all training into one block grant — adult, youth, basic literacy and personal rehabilitation.

There is good reason to fear that under block grants, the fledgling school-to-work program will be devoured by larger, entrenched state bureaucracies committed to old programs. Block grants encourage governors to channel money in old ways. The inertia of the old mindset is to stick with old educational methods and to keep education and business separate.

A block grant is a crude instrument of reform. By lumping an intelligent and workable new program in with old programs that have not been effective, block grants risk suffocating a promising initiative in its infancy.

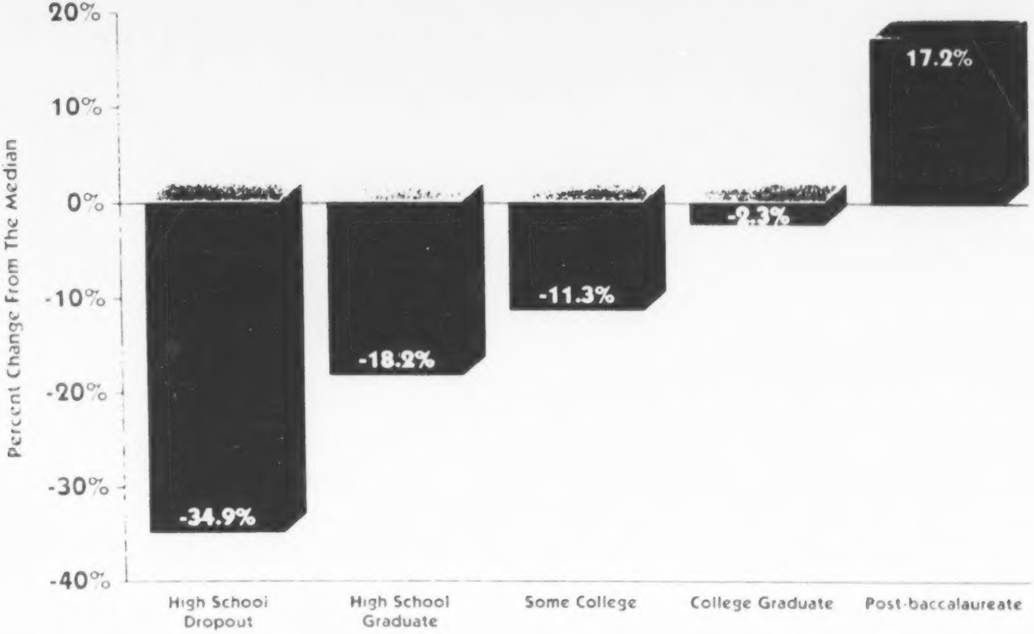
Rethinking education means not only rethinking how schools teach but how Congress legislates. In its zeal to trim the budget and devolve programs to the states, Congress is indiscriminately risking an innovative idea that could bring lasting benefits to America's [illegible] its child[illegible]

Real Income Has Grown More Slowly in the U.S. than in Competitor Nations, 1973-93



Source: Organization for Economic Cooperation and Development

Chart A



Change From Median Family Income

By Education Of Head Household, 1973-1992

Source: Postsecondary Education Opportunity, 1994

Chart B

MEMORANDUM

March 21, 1995

To JMJ
From Cory
Subject Summary of Census Bureau Survey of Hiring, Training, and Management Practices in American Business

On February 20, 1995, the Census Bureau released a survey which provides insight into the relationship between education and the work place. Some key results, based on the responses from 3,000 employers nationwide, are as follows:

> **One-fifth** of American workers are not fully proficient in their jobs, and employers express a lack of confidence in the ability of schools and colleges to prepare young people for the work place.
>
> Employers rank "Years of schooling completed" far below other factors when asked about qualities that count in hiring employees. Attitude, communication skills, previous work experience, recommendations from current employees and previous employers, and industry based credentials certifying skills rank higher.
>
> Many employers reported that they no longer hired students straight out of school and put them into career-track jobs.
>
> Increasingly, employers use temporary-employment agencies as screening tools, and many employers no longer consider young people who do not have years of experience in the work force.
>
> **Eighty-one percent** of employers reported paying for or providing some form of formal training to workers.
>
> In training their own workers, employers were far more likely to seek out equipment suppliers or private consultants than educational institutions.
>
> Rather than reflecting a trend some experts have predicted toward low-skill, dronelike jobs, the survey found an increasing level of skills being demanded in the work place.
>
> **Fifty-seven percent** of employers said that skill *requirements* of their work places had increased in the last three years.
>
> Employers said that **40 percent** of production and non-supervisory employees used computers in their jobs.

These examples are cited from *The New York Times*, February 20, 1995, A1 & A7

Quotes

If indeed it is true that the organization of the work place and the quality of the work force is going to be the central factor in keeping us competitive, there's not much evidence here that we're utilizing the best practices.

--Joan Wills, specialist in work force issues at the Institute for Educational Leadership

Employers have given up on the schools, and by giving up, they've lost their ability to influence them.

--Nevzer Stacey, specialist in education in the work force at the Department of Education's Office of Educational Research and Improvement

A lot of employers say they have absolutely no contact with the schools.

--Peter Cappelli, management professor at the University of Pennsylvania's Wharton School

What kind of message are we sending out to kids when we say their grades or the quality of their school or their teachers' recommendations are not important?

--Lisa M. Lynch, professor at the Fletcher School of Law and Diplomacy at Tufts University

US Children Are At The Bottom In Math Performance

13 Year Olds Taking IEAP Exam

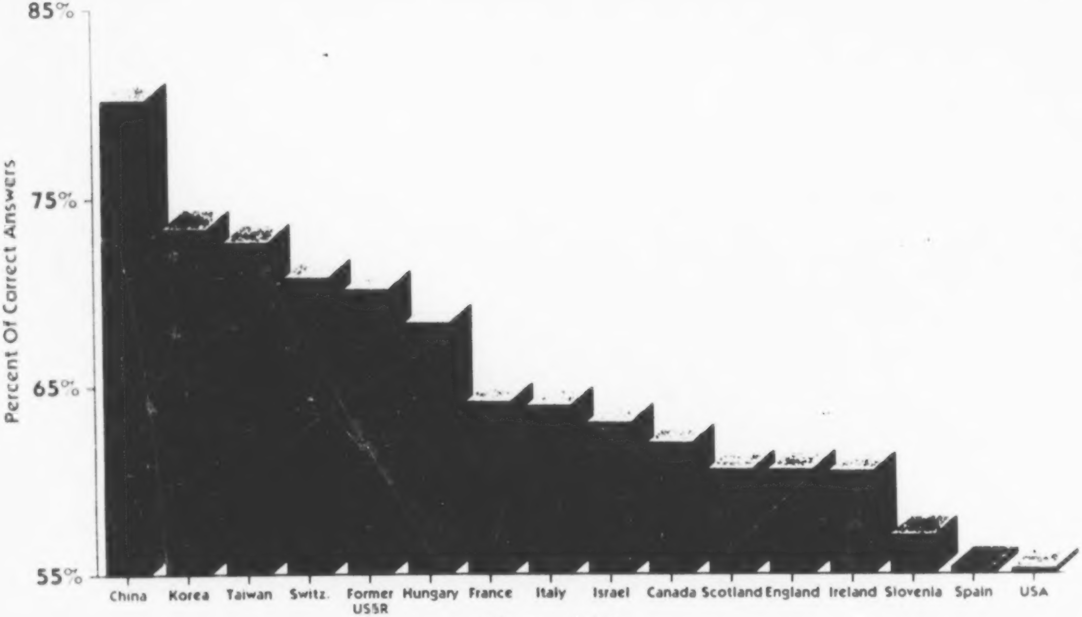


Chart C

Source: National Center for Education Statistics, 1993

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PREPARED STATEMENT OF DAVID BOESEL

Senator Jeffords, Senator Pell, and Members of the Subcommittee, thank you for the opportunity to testify on the subject of vocational education. I directed the National Assessment of Vocational Education, which the Carl D. Perkins Vocational and Applied Technology Education Act, as amended in 1990 (the Perkins Act), mandated and assigned to the Office of Educational Research and Improvement (OERI). The study began in 1990 and involved many surveys, case studies, reviews of administrative records, statistical analyses, and literature reviews. OERI staff working on the Assessment also personally visited vocational programs in 25 sites. A five-volume final report based on these many sources of information was delivered to Congress on schedule in June, 1994. My testimony will be based on the findings and recommendations of the Assessment.

Although the Assessment dealt with vocational education at both the secondary and postsecondary levels, in the brief time available here, I will focus on occupational preparation at the secondary level, which is the more problematic of the two.

Background

Our nation's system of secondary education prepares some students for the future much better than others. It serves the interests of students in college preparatory programs fairly well, although there is room for improvement. However, it does not serve the interests of other students -- those in general and vocational education programs -- very well. While the real earnings of college graduates have increased over the last decade, the earnings of high school graduates with no further education have decreased. Vocational students do a little better than general-track students in the labor market, but not much. Both are losing ground in a competitive global economy increasingly knit together by information technology.

What vocational and general track students need most is a higher level of cognitive skill development. The Assessment provides a technical definition of cognitive skills, but essentially they are thinking and problem-solving skills such as those typically measured by standardized verbal and quantitative aptitude tests. Cognitive skills are critically important because, as the research shows, they are strongly associated with:

- Better performance on the job,
- Better chances of entering and succeeding in postsecondary education, and
- Greater likelihood of obtaining and benefiting from additional education and training over the course of a lifetime.

In my opinion, the development of cognitive skills should be the highest priority for all secondary students, and especially for those who are now in vocational and general education programs. The National Assessment recommends that high schools "front load" on the development of cognitive skills and broad technical skills such as computer literacy. This approach would provide an investment in versatile, flexible skills that can be used later in many different ways, both in work and in further education. Maximizing this investment may require deferring much occupationally specific training -- especially that which focuses on procedures, tools, and vocabulary -- to the postsecondary level or to the workplace, where the labor market payoff is higher.

How can cognitive skills be improved? Students learn in many different ways, but research suggests that teaching in an applied context -- for example, solving problems from the world of work -- can be a very effective way of developing these skills. One way of contextualizing learning is through the integration of academic and vocational education. Another important element in the development of cognitive skills is the use of high standards and challenging curricula, or, in the case of work experience programs, rigorous learning requirements.

How can participation in postsecondary education be increased, especially for students currently in the vocational and general tracks? Again, there are many ways of doing this, but one promising way is through the development of tech-prep programs that link the last two years of high school with two years of postsecondary education in a coherent sequence of integrated courses leading to a two-year degree.

The 1990 Perkins Reforms

The 1990 Perkins Act recognized the need for more intellectual content in the education young people receive to prepare them for work by requiring all districts that receive basic grant funds to integrate their academic and vocational curricula. It recognized the need for more students to enter and succeed in postsecondary education by providing grants for the development of tech-prep programs. And it recognized the importance of standards by requiring states to develop, and local systems to implement, systems of performance standards and measures.

Integration, tech-prep, and performance standards are the three key elements in the Perkins Act's plan to reform vocational education programs. Togethor they comprise a legislative effort not just to improve vocational education, as previous legislation had done, but to break with the past and transform it. How successful have these provisions of the Act been?

Integration

The Perkins Act stimulated integration efforts in school districts across the country. Our data show that districts receiving Perkins Basic Grant funds took more steps to integrate their curricula than did non-recipients. Moreover, districts reporting a greater Perkins influence on their agendas also took more steps to integrate, holding other factors constant in our analysis.

However, by 1993, the second year of Perkins implementation, those efforts still lacked scope and coherence. They lacked scope because they involved relatively few students and courses, and were usually confined to vocational programs. They lacked coherence because they were usually limited to individual courses, rather than comprising sequences of related courses. Moreover, for those interested in promoting integration, the traditional division between academic and vocational education remained a formidable obstacle. The Assessment found that vocational teachers and academic teachers are more likely to coordinate courses among themselves than with each other. In effect, the two curricula often constitute two separate cultures in secondary education.

One strategy that could improve the coherence of integration efforts is the development of organizational or curricular frameworks to provide structure and rationale for integration. Some districts are using tech-prep programs for this purpose. Career academies and career magnet schools also provide frameworks of this kind. The Assessment suggests a curriculum designed around a system of majors based on industries that would prepare students for careers, not just jobs.

However, simply integrating academic and vocational curricula will accomplish little if the courses that are integrated are not rigorous and challenging. Currently, most applied academic courses are not accepted as satisfying admissions requirements in universities. Though there are differences of opinion about the reasons for this refusal, the quality of many of these courses and course materials is certainly a factor.

Despite these problems, it is important to keep in mind that integration efforts are still new, and there are visible signs of progress from year to year. For example, the Assessment found that school districts provided teachers with more time to work on integration in the second year of Perkins implementation than in the first. Moreover, a majority of students in higher-level vocational courses reported that their classes placed major emphasis on understanding scientific and mathematical concepts and on solving work-related problems. In addition, the number of districts establishing career academies doubled between 1990 and 1993. Research has shown that career academies and career magnet schools can improve retention and learning for students in the first year or two of participation.

Large-scale integration will not be accomplished in a few years, it will require sustained effort and constant focus over a long period of time. States can help substantially in this process -- our survey data show that the more state support for integration a district has, the further along it is likely to be in integrating its curricula.

Tech Prep

Tech prep initiatives have expanded tremendously since the concept was first introduced in the mid-1980s. The 1990 Perkins Act added impetus to a movement already well under way. As was the case with integration, districts that received Perkins funds took more steps to develop tech-prep programs, on average, than did non-recipients. Moreover, the greater the reported influence of the Perkins Act in a district, the more steps it was likely to have taken to develop a tech prep program, holding other factors constant in the analysis.

In 1993 about one third of secondary school districts, an estimated 3817, reported tech-prep initiatives that met the Perkins definition of tech-prep. However, most of these initiatives were in very early stages of development. Some 399 districts reported that tech-prep students had gone on to the postsecondary phase of the program, and 44 postsecondary institutions indicated that they had graduated tech-prep students. Since there are about six districts to a community college in an average tech-prep program, we can estimate that as of 1993, approximately 264 districts were participating in fully developed tech-prep programs.

Despite, or perhaps because of, this rapid expansion, tech-prep programs come in a bewildering variety of sizes and shapes. Some are nothing more than relabeled vocational courses or work experience programs. Others comprise one or two applied academics courses. Many are articulation agreements that coordinate a few existing high school courses with community college courses. Still others are new and tentative, but reflect a serious commitment to long-range, full-scale development. And, as noted above, a relatively small number are fully developed programs resembling the Perkins model.

As in the case of integration, most tech-prep programs are relatively new. About half of those reported in our surveys were just getting started in 1992. Among the small number of well established programs, estimated retention rates and rates of transition from secondary to postsecondary education are quite respectable, though we must view the estimates with caution for methodological reasons. Some of the newer programs will unquestionably mature into programs that have both scope and depth, although we cannot tell how many. As with integration, the implementation of tech prep must be viewed as a long range process, but one worth pursuing. The presence of a large and active national tech-prep movement is helping the process along.

Performance Standards

While the implementation of integration and tech-prep was a mixed bag as of 1993, the Perkins requirement that states develop systems of performance standards and measures was being met. By 1993 most states had exceeded the specific requirements of the Act, developing more measures and applying them to more students than required. By 1993, also, most districts had started to implement the standards and measures developed by their states. One limitation is that most districts lack measures of occupational skills although they would like to have them. Such measures are to be developed by the National Skill Standards Board established by the Goals 2000: Educate America Act.

Because these state systems of standards and measures are still new, important questions remain unanswered. To what extent are the assessment systems being used as tools to improve education through annual cycles of evaluation and change, and to what extent are they being viewed simply as data requisitions by the state to which districts must respond? On average, are students in programs covered by these systems achieving more than they would have otherwise? The systems will have to be more fully developed before these questions can be answered.

Comment on the Implementation of Perkins Reforms

The fact that state officials did a good job of developing the systems of performance standards and measures called for in the Perkins Act is one indication that they can play a major role in reforming secondary vocational education. A second indication is the finding that state support for integration is strongly associated with progress in local efforts to integrate. A third is the visible leadership that states such as Washington, South Carolina and Vermont are providing in the reform of work oriented education systems in their local districts. As of 1993, the National Assessment identified 20 states that had developed policies for the reform of work-related education.

The 1990 Perkins Act de-emphasized the role of the states in vocational education reform, channeling more resources to localities in hopes of stimulating grass roots change. This strategy seems to have generated a widespread but low-level ferment of reform activity without much structure or direction. The National Assessment observes that the states are in a position to give greater definition and coherence to these efforts, and recommends that a new Perkins Act encourage states to play a leading role in the restructuring of work-oriented secondary education.

Special Populations

The Perkins Acts (1984, 1990) and their predecessors have traditionally provided funds for two main purposes: 1) program improvement and 2) supplemental services for special population students.[1] Before 1990, the legislation had set aside funds for supplemental services. The 1990 Act eliminated many of the set-asides, but built in many guarantees for special population students and required districts receiving basic grant funds to actively recruit them into vocational education, where they were to be provided with services sufficient to their needs.

The National Assessment found that Perkins funds were being targeted on districts with high concentrations of special population students, as intended. In addition, districts that received Perkins funds, especially urban districts with many special needs students, provided a wider range of services than others, as the legislation intended. Nevertheless, administrators reported that not all student needs for services were being met, even with combined federal, state, and local funds.

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[1] The 1990 Perkins Act defines special population students as those who are disabled, educationally or economically disadvantaged, of limited English proficiency, enrolled in vocational programs non traditional for their gender, or in correctional institutions.

The National Assessment also found some disturbing changes in vocational enrollments that may have been related to the legislation. On the one hand, vocational enrollments had declined for over a decade. On the other, enrollments of special population students had remained constant, so that the proportion of special population students in vocational education had gradually increased, beginning around 1980. In effect, A and B students were leaving vocational education for academic courses, while D students were a growing share of all vocational enrollments. This tendency was most pronounced in the separate half-day area vocational schools, which in some areas were becoming special needs schools. Thus, by recruiting special population students to vocational education and trying to ensure that supplemental services would be available there, the legislation may have contributed to the growing isolation and stigmatization of vocational education -- outcomes diametrically opposed to the integrated education envisioned by the Perkins Act.

The Assessment found no reason to assume that special population students as a category belonged in vocational education rather than in academic programs. It is true that vocational education reduces dropout rates, especially for the educationally disadvantaged, and that disabled students derive some economic benefits from vocational coursetaking. On the other hand, there is no evidence that economically disadvantaged or limited-English-proficiency students are better off taking vocational education than an academic course of study. In any case, the paramount consideration should be the educational interests of the individual student, not his or her presumed needs as a member of a group. Further, if students need supplemental services, they should not have to enroll in vocational courses in order to get them. The services should be available to all students who need them, regardless of chosen course or program.

Recommendations

The foregoing leads to three broad recommendations:

1. The new legislation should not try to balance program improvement and supplemental services to special populations. Rather, it should marshal federal resources for reform -- integrated education, high standards, and challenging courses to develop high levels of cognitive skills, arrangements such as tech prep to facilitate entry into and completion of postsecondary education, work experience to foster a knowledge of the world of work and the behavior and motivations it requires. The interests of special population students can best be served by ensuring that they participate fully in the reforms, not by adding supplemental services to the existing vocational education system. Additional services should be made available through a legislative vehicle for education in general, such as the Improving America's Schools Act.

2. The new legislation should encourage states to take a leadership role in the reform of vocational and general education. The reform programs should encompass a broad segment of the student body and should prepare at least some students for four-year colleges, as well as providing other options. One way to encourage state leadership is through competitive grants, as the School-to-Work Opportunities Act is doing. In the past, states receiving formula grants under the Perkins Act have been pressured by local districts to allocate funds broadly and have parceled out funds in packages too small to make much of an impact. The 1990 Perkins Act improved the situation substantially by setting minimum grant sizes for local recipients. In framing a new vocational education act, legislators can anticipate that the pressures on states to allocate at least some funds to all localities will continue. Focusing federal funds on reform will require some provision to prevent this "broadcasting" of federal funds from occurring.

3. The new legislation should provide a limited but definite role for the federal government. In addition to encouraging the states to take the lead in reforming vocational and general education, the government can help by taking steps such as: a) developing

standards and measures that states and localities can adopt voluntarily, b) supporting the development of high-quality integrated curricular materials through consortia of states, and c) providing funds for training teachers to teach in integrated settings, including the training of prospective teachers in colleges of education. Assistant Secretary Kappner's testimony also speaks to the need for better coordination of vocational education, job training, and other related activities, a need which the Assessment documented.

PREPARED STATEMENT OF SUSAN BROWN

Senator Jeffords, Senator Pell and members of the Senate Subcommittee on Education, Arts and Humanities. My name is Susan Brown, and I am the Director of the Maine Youth Apprenticeship Program which is part of the Maine Technical College System. It is a pleasure and an honor to be here today to talk with you about my experience in working with a specific program within Maine's School-to-Work framework.

In 1992, then Governor John McKernan saw the need for a School-to-Work initiative which would prepare Maine's young people for the twenty-first century. He realized that Maine's economic future depended on well-trained workers and that her citizens' future depended on skills training. He chose as the cornerstone of school-to-work, the Maine Youth Apprenticeship Program (MYAP). This program, which begins in a student's junior year of high school, combines rigorous work-based training with a strong academic program, and it concludes with a year at one of Maine's seven Technical Colleges. The youth apprentice graduate attains a high school diploma, a Certificate of Skill Mastery and is halfway to an associate degree, as well as having substantial work experience in one of 23 occupational areas.

I have been asked to answer some specific questions for you today:

1. How does School-to-Work differ from other vocational education and Tech-Prep programs?

The Maine Youth Apprenticeship Program seeks to augment other programs, not to replace them. There are a vast number of young people who presently are not being well served by their educational experiences. Every strong technical education program enhances another, so the more good programs which are available the stronger the entire technical education system will be. In Maine, we have sought out linkages between youth apprenticeship and the Tech Prep and vocational education programs. Tech Prep's applied academics, for example, are uniquely suited to meet the academic needs of our youth apprentices; and the secondary technical schools offer many courses which complement our youth apprentices' work site experience. Some of our youth apprentices are students at vocational/technical centers, some come from college prep and others from the business or general education tracks.

Of course, there are some key differences that should be noted. First, MYAP involves businesses directly in the education process with a uniquely structured work-based component unlike any other vocational or cooperative education program. To participate, students are required to assemble a portfolio and a resume and interview for the positions they want. Also, youth apprentices are guaranteed admission into one of our Technical Colleges for the third and final year of the program. Upon completion of the program, youth apprentice graduates receive a Certificate of Skill Mastery, which was developed specifically for this program, and they receive college credit.

2. A) Why has School-to-Work, particularly in Maine, been so successful?

Like many other states, Maine has been in economic transition for several years. Maine businesses and citizens are demanding more of their public schools, and the public has begun to see the value of preparing high school students for the workplace and for continued education. Youth apprenticeship and other school-to-work programs are addressing these vital needs. We are engaging high schools to adapt their programs, and we are asking the business community to step up and participate as full partners. We are providing a solid pathway to success for students who may not have been engaged before, and, I believe, we have designed an excellent program.

Equally important, though, has been the leadership provided by Maine's chief executive, former Governor John McKernan, who created a vision of school-to-work in Maine, as well as top government officials, leading educators and the CEOs of Maine's key businesses -- all of whom worked together to promote youth apprenticeship since its inception in 1992. Maine's present governor, Angus King, and the Maine Legislature have also supported the school-to-work initiative.

B) How can it be improved?

School-to-work initiatives can be improved by providing incentives for schools to integrate work-based learning into the curriculum, by abolishing the general track of study in schools and by revamping the teacher preparation curriculum in colleges and universities to include applied academics. I believe we should continue to explore ways to encourage business participation, perhaps through tax or other incentives.

C) What roles have the federal, state and local governments played in implementing the School-to-Work program?

At the federal level, the most significant involvement has come with the School-to Work Opportunities Act as Maine was one of eight states to receive initial funding. This money has been crucial in providing school support, standards development and curriculum modification. In addition, state government has provided funding and assistance with the design and implementation of school-to-work, as well as public leadership in the promotion of the initiative (state government, for example, provided help in clarifying child labor laws). Without those investments, the impact of this significant educational change would be far less and would occur much slower than it has. As school-to-work is implemented more fully and the Maine Youth Apprenticeship Program matures, we expect that local level involvement will continue to deepen and increase in significance.

3) How can the federal government better coordinate School-to-Work and vocational education, and federal legislation such as the Elementary and Secondary Education Act, the Goals 2000 Educate America Act, The Job Training Partnership Act and the Vocational Rehabilitation Act?

Better coordination can be provided by allowing states to have flexibility in developing programs, particularly those that cross department lines.

Because School-to-Work is so new, both the framework and the funding need to be retained. Elimination of funding at this point would seriously reduce our ability to implement school reform.

4) How has business become involved in School-to-Work?

The involvement and full participation of businesses is at the very core of youth apprenticeship. Maine business people -- CEOs, managers, front-line workers -- have contributed to every aspect of the program, including the basic design, performance assessment, curriculum and more. Businesses have also contributed financially -- they are assessed a fee of approximately $5,000 for each youth apprentice, covering the student's stipend, insurance and college tuition costs. This year, Maine businesses will contribute about $750,000 to the program. Businesses are also required to provide a "meister" for each youth apprentice, a company employee who supervises and mentors the student in the workplace. They are also working more closely with their local schools to develop a curriculum which more fully reflects the needs of the workplace.

5) What are the roles of secondary schools and post secondary institutions in facilitating School-to-Work?

The link with the technical colleges is one of the most important components of the Maine Youth Apprenticeship Program. Each youth apprentice is guaranteed admission into a college if he or she meets the academic requirements. The technical colleges recognize the value of the workplace experience by allowing up to fifteen credit hours. The technical colleges also award a Certificate of Completion at the end of the program, and the youth apprentice is halfway to an associates degree in Workplace Technology.

Secondary schools and vocational schools are providing the academic portion of the program. They have formed consortia to develop the academic portion of the program by integrating the workplace competencies with the academic curricula.

In conclusion, this is an exciting initiative which combines school-based and work-based learning by providing students with occupational skills and a strong academic foundation, while making the connection between school and work. It also makes a critical link with higher education at a time when post secondary education and technical skills are becoming essential parts of most jobs. This program is truly a collaborative venture between schools and businesses in Maine with schools providing the educational component and businesses providing the work-place component. Because this program is changing fundamentally the school, work and student cultures, it has been and continues to be challenging.

Because educators have promoted a four year college education as the best option for all students, many view any other choice as second rate. This program has helped adults recognize there are other options which are equally valuable. People as diverse as the former Commissioner of Education, a senior vice-president at one of Maine's largest businesses and a single mother who cannot afford college tuition for her child see this program as desirable for one or more of their children. A graduating youth apprentice has said that when she has children, she wants them to participate in the Maine Youth Apprenticeship Program.

We are changing the way young people view themselves. We are also changing the way schools and businesses view our young people. Because of the responsibilities these youth apprentices accept and because of the support they receive as they bridge the path from youth to adulthood, these young people far exceed our expectations. The first chapter of this program is coming to a close as our first class of youth apprentices are graduating. We are proud of these young people as they complete their first year at a technical college. Some are being hired by their present employer, some are continuing at a technical college and some plan to complete a four year degree. We have called them pioneers: they have called themselves guinea pigs. By whatever name they have been successful.

[Additional material is retained in the files of the committee.]

PREPARED STATEMENT OF DAVID MERTES

BACKGROUND

The California Community College System, with its 106 colleges, is the World's largest system of higher education. Its enrollment of 1.4 million students represents more than 20% of our nation's community college population. The Community Colleges represent more than 74% of all of the students enrolled in higher education in California. Over 950,000 of those students are enrolled in the system's 350 vocational/technical programs. In addition, Community Colleges provide customized education and training to more than 150,000 employees in over 1000 companies annually. Clearly, Community Colleges are a primary vehicle for workforce preparation and in that role they contribute significantly to the economy of California, to the global competitiveness of its business and industry and to the quality of life of its citizens.

California received $115 million in Perkins funds in 1994-95, of which approximately 46% (or $50 million) went to the Community Colleges. Although Perkins funds represent only 4-5% of the State's budget for vocational education, they are critical to the colleges' ability to improve their programs. Through a very focused state and local planning process, Perkins funds have created change throughout the high school and community college systems in California.

WHAT HAS WORKED UNDER PERKINS

Three funding titles under Perkins have had the most impact in California. They are Tech Prep, State Leadership and Basic Grants to local colleges.

1. Tech Prep

In California Tech Prep is jointly administered by the State Department of Education and the Chancellor's Office through 85 local consortia of over 600 high schools, 106 community colleges and thousands of business partners. Tech Prep funds have provided curriculum development and faculty training which ensure students a seamless transition from high school to college. The methodologies within Tech Prep rest on sound principles of learning. That is, theory is integrated with practice and classroom based learning is interwoven with work based learning. Tech Prep activities within two districts provide examples of the impact of this program, particularly as it effects teacher training and the involvement of business in curriculum development.

Coast Community College, its high schools and businesses have established an Integrated Academics Training Center. To date, over 400 high school and community college teachers of Science, Mathematics, English and Communication have been trained in this "real world" methodology. Teachers are excited and their excitement is evident in the classroom. Students are no longer asking "Why do I need to know this?" because they are constantly applying what they are learning.

Business and industry partners plan a significant role in Tech Prep education. They: (1) participate in curricula development; (2) serve as guest teachers and as adjunct faculty; (3) provide worksite experience, career orientation and job shadowing experiences for students, and (4) donate materials and equipment.

State Center Community College District, its 29 high schools and its Chambers of Commerce established the Fresno County Employment Competency Program. Their goal is to graduate high school students with the critical skills necessary to be successful. These skills (English, social and interpersonal communication, mathematics, critical thinking, work ethics, and technology) are congruent with those outlined in the Secretary's Commission on Achieving Necessary Skills (SCANS) report. Employers come into the classroom and assess students' knowledge and skills, review their attendance records, portfolios, team building experiences and grade point averages. Seventy-five employers are involved in pilot testing this program at five high schools.

Business partners help create new curriculum. One example is the Caterpillar Diesel Program. The partners include Quinn Caterpillar, Kings River Community College and five local high schools. Quinn has provided a staff person to team with the faculty in developing the curriculum and implementing the program. In addition, Quinn has provided in excess of $250,000 in equipment and instructional supplies.

Tech Prep has not only created the much needed collaboration between high schools, community colleges and the business community; it is creating the most significant grassroots reform in education. Through the integration of the traditional arts, sciences, humanities, and vocational curriculum, Tech Prep is breaking down barriers between students, faculty and business. These programs recognize that a "high-skilled, high-wage" workforce must demonstrate the positive traits associated with reliable workers and responsible citizens as well as the technical skills and general knowledge necessary to begin the job and participate in life long learning. The State Council on Vocational Education (SCOVE) has conducted hearings throughout California regarding the Perkins Act. To their question: "What is working well?", the unanimous response was "Tech Prep".

2. State Leadership

These funds have been used to (1) efficiently train faculty to integrate academic and vocational education, (2) build model curricula to meet emerging statewide needs; (3) leverage other public and private funds for program improvement; and (4) build a state level performance outcomes accountability system.

Given the speed of change, the multiple locations of a business or industry, the mobility of society and the limited resources, colleges can no longer afford to develop curricula campus by campus. In California, colleges have formed consortia to develop model curricula in emerging fields. Some examples include environmental technology, advanced transportation, biotechnology and core manufacturing technology. In environmental technology, the Community Colleges, in partnership with the University of California in Davis and Livermore National Laboratories developed curricula which includes regulatory requirements, disposal and reduction of hazardous wastes. Chemistry faculty in 27 colleges were retrained to deliver this vocational curriculum. This program was expanded to five Western states through the formation of Partners in Environmental Technology Education

(PETE) and is now a national program funded through the U.S. Department of Energy and National Science Foundation. In partnership with the California Trade and Commerce Agency and the University of California, the Community Colleges support Regional Centers to assist businesses with environmental compliance.

The California Council on Science and Technology identified over 400,000 potential jobs in California in advanced transportation. The Community Colleges in partnership with Sunline Transit, Southern Pacific Gas and other state agencies developed a model Compressed Natural Gas curriculum to train technicians to install and repair alternative fuel vehicles. The Department of Defense has provided funds to expand this program to five additional sites and to retrain displaced defense workers as alternative fuel technicians. To date, the public dollars invested have leveraged private funds at a three to one ratio. Currently, there is pending State legislation to enable penalty funds from compliance violations to be used to further expand this program.

The development of the biotechnology consortium and the development of the core manufacturing program are additional examples of using Perkins funds to leverage other public and private sector funds to create new programs and train faculty and students to meet the workforce preparation needs of California. Community Colleges are strategically positioned to provide the training necessary to transition new technologies from the research laboratories to the workplace.

State leadership funds from Perkins have been used in California to create an accountability system of performance outcome measures of its vocational programs. The Unemployment Insurance (UI) wage records are matched with student records to provide an efficient and inexpensive method of tracking students' earnings after leaving college. Preliminary data indicate that students who complete the Associate Degree earn significantly higher salaries and are unemployed less frequently than students who only complete high school. These data can be aggregated by college, by program and by special population to determine the State's progress in enabling economically and academically disadvantaged students, physically disabled students and limited English proficient students to succeed. These data can also be broken down by age, ethnicity and gender. While wages earned is not an inclusive or perfect measure of the value added impact of education, it is a powerful measure in that it occurs outside the classroom and focuses on an objective outcome measure that students, parents and taxpayers understand.

3. Basic Grants

Allocations to local colleges are a major source of program improvement funds. Perkins funds in this category are allocated to colleges to: (1) train faculty to develop and integrate academic and vocational curricula, and (2) acquire equipment to enable students to meet industry standards.

RECOMMENDATIONS FOR IMPROVEMENT OF PERKINS

While the Carl D. Perkins Vocational and Applied Technology Education Act of 1990 has worked well for California, there is room for improvement. Specific recommendations include:

1. Focus funds on program improvement for all students utilizing state leadership and basic grants to integrate academic and vocational education, train faculty and expand Tech Prep to become the pervasive model for delivering vocational and technical education.

2. Focus accountability on student outcome (not process) measures utilizing unemployment insurance wage data. In this manner, State and local education agencies would be held accountable for the success of all students including females and members of special populations. Focusing on process measures such as concentrations of special populations and types of services limits the flexibility of local providers and diverts attention from program improvement.

3. Provide tax incentives for business and industry to encourage them to provide curriculum development, internships for faculty and students and donate equipment. While business and industry benefit from improved educational programs, the ultimate beneficiary is the economy and thus, the investment of tax dollars is appropriate.

4. Ensure that Perkins funds flow through the Federal and State Departments of Education. Since 1990, Perkins funds have worked to effect educational reform and program improvement and have been used effectively to leverage other funds. States are not equally prepared to handle block grants with assurance that those funds would be utilized to improve vocational and technical education programs, thus, to include Perkins in block grants to states could interrupt a program that is working and put Perkins programs at risk while states are trying to develop systems to ensure collaboration. School to Work funds can serve as a pilot test of federal, state and local efforts to build collaborative systems utilizing funds from both education and labor. This effort should be tested before other programs are block granted.

RECOMMENDATIONS REGARDING CONSOLIDATION OF FEDERAL JOB TRAINING PROGRAMS

Community Colleges also play a critical role in workforce training and development. As Congress considers consolidation of Federal job training funds for states, I would urge you to design the parameters to ensure that state and local entities do not waste federal dollars by creating parallel structures to administer the funds. For example, Community College districts are legal entities with Boards of Trustees who are locally elected officials. They have the administrative and financial systems in place to ensure accountability for the funds. Their programs are accredited and they are building student outcome accountability systems. They have electronic infrastructures and communication networks in place to manage data and deliver instruction. Community Colleges have a long history of partnerships with business, industry, government and other segments of education. They have a successful track record in providing support services to ensure access, admissions, counseling, placement, and financial aid. Additionally, many provide assistance with childcare, transportation, and housing. They provide flexible schedules in which their facilities are available from 7:00 a.m. - 10:00 p.m. and on weekends. Their programs vary from full semesters to customized short term training. Community Colleges are within driving distance of most citizens and are uniquely able to provide life long learning opportunities for employers whose employees are in need of continuous training as well as for the unemployed and the emerging workforce.

Community colleges are truly an "American invention". They are designed with flexibility to adapt to the needs of their local communities. They are strong contributors to the economy and have tremendous potential in rebuilding America's middle class. Federal dollars should be spent to augment and improve programs and to leverage other funds. Federal funds should not be spent to create or support parallel administrative structures that exist only to administer federal funds at the state or local level.

[Whereupon, at 12:20 p.m., the subcommittee was adjourned.]

BUILDING A BETTER WORKFORCE: BUSINESS' ROLE IN VOCATIONAL EDUCATION

THURSDAY, MAY 25, 1995

U.S. SENATE,
SUBCOMMITTEE ON EDUCATION, ARTS AND HUMANITIES,
OF THE COMMITTEE ON LABOR AND HUMAN RESOURCES,
Washington, DC.

The subcommittee met, pursuant to notice, at 10:08 a.m., in room SD–430, Dirksen Senate Office Building, Senator Jeffords (chairman of the subcommittee) presiding.

Present: Senators Jeffords, Gorton, Pell, and Kennedy.

OPENING STATEMENT OF SENATOR JEFFORDS

Senator JEFFORDS. I am pleased to have all of you here, and now I am going to say goodbye, because we are moving. We are in the middle of a number of roll call votes, probably 30 or 40, lasting 10 minutes each. The only way we can hold a hearing and have it be in any cogent form will be to move it over to the Capitol. Unfortunately, when we move over to the Capitol, the room available has very limited space for the audience. We will be moving to the Commerce Committee room, which is on the first floor in the Capitol, Room S-146.

Thus, I will give my opening statement, because I have time now to do that, and then I will recess the hearing temporarily as we move over to S-146. That way, when there is a vote, since they are running one right after the other, I can vote twice within a minute and have 16 or 18 minutes of uninterrupted discussion. So that is what we will be doing.

So let me first of all thank all of you for your patience. I know we have been moving the times around, but now we are moving the location around, so we have all of that variety to keep you interested. So I thank you for your patience.

I especially want to thank the witnesses for their cooperation.

The first hearing I held this year focused on the important role of business in education. I noted the fact that over one-half of high school seniors in this country graduate functionally illiterate, which creates a substantial drain on our economy.

We have the charts—wonderful. As you can see from the literacy chart, the red is for those who graduate functionally illiterate, and obviously, the yellow indicates those who are literate, and the chart gives you information on those two. [Chart A-may be found in the appendix.] In real terms, this amounts to more than $500 billion a year in a drain on our economy. That is $225 billion directly in the marketplace, $208 billion for welfare expenditures, and $43 billion for the cost of crime to our society. In addition, United States companies spend roughly $200 billion each year in remedial and employment training. [Chart B-may be found in the appendix.]

It is interesting that European business competitors spend a like amount, but they spend it on the 15 to 19-year-old students before they graduate.

This drag on our economy is perhaps one reason why productivity in the United States has grown much slower than in competitor nations. The next chart demonstrates where our productivity is relative to other nations. [Chart C-may be found in the appendix.]

On an individual level, the consequences are equally devastating. [Chart D-may be found in the appendix.] Over the past 20 years, the only people who have increased their real earnings are those with at least a 4-year postsecondary degree. That is a postsecondary degree. Everyone else has fallen. Especially the high school dropouts are the ones who have taken the biggest drop and who are earning 33 percent less than they did 20 years ago.

Two weeks ago, the first detailed American business survey was released by the United States Department of Education. This study found that a 10 percent increase in the educational attainment of a company's workforce resulted in an 8.6 percent increase in productivity; whereas a 10 percent increase in the value of capital stock, such as tools, buildings, and machinery resulted in only a 3.4 percent increase in productivity, again emphasizing the need for us to correct our educational problems.

The Motorola Corporation is one shining example of a business' success in investing heavily in education and training. Motorola is a $22.2 billion manufacturer of cellular phones, computer chips and other products. This year, Motorola will spend almost $150 million for a minimum of 40 hours of training to each of its 132,000 employees, which amounts to more than 4 percent of its payroll allocated for training. This is 3 percent above the American industrial average. Since 1990, Motorola has seen its annual sales rise by 18 percent, while earnings have increased 26 percent. Motorola's goal is that by the end of the decade, every employee will study 80 to 100 hours per year, amounting to $300 million.

Over the last several years, we have seen greater involvement by businesses in our educational system. Goals 2000 and the School-to-Work Opportunities Act are examples of business working with Federal, State and local leaders in developing educational initiatives that will benefit not only students, but our economy.

In the book, "Reinventing Education," Louis Gerstner, chairman and CEO of IBM, writes: "Business is not only a major stakeholder in the issue of education quality; it is the only potential source of major institutional pressure on the system. Without business pressure to improve the schools, there will be no one else to act. And if no one acts, the schools will ultimately fail to change and fail to prepare our students and citizens adequately for the next century."

Today we will hear from an array of business leaders who will share their experiences regarding their involvement in our educational system generally and vocational education in particular. Their testimony will assist us in answering two important questions, questions which serve as our guide for this year's job training, vocational education and adult education consolidation discussion. One, how can we design an education and training delivery system that will meet the challenges posed by a competitive global economy? Two, what should the roles of the Federal Government, State and local governments and the private sector, particularly business, in both designing and implementing an education and training system?

A recent BusinessWeek cover story was about the relationship between business and education. It posed the question: "Will Schools Ever Get Better?" We must all strive to see that by the turn of the century, the cover story will read: "American Schools First in the World."

Thank you. We will now recess the hearing and go for the big move from here to the Commerce Committee room. Right now, of course, we are on the floor fighting for appropriations and money, so that is why I have to keep a close eye on what is going on there.

Thank you very much. We will recess temporarily and reconvene in S-146.

[The subcommittee recessed at 10:15 a.m., to reconvene at 10:34 a.m., in room S-146, U.S. Capitol.]

Senator JEFFORDS. I just met Senator Pell in the hall, and he told me to go ahead, so we will go ahead; and I have just voted, so we will have about 15 minutes of uninterrupted time, and I will call the hearing back to order.

Our first witness today is Hedrick Smith. In addition to his current position as editor-in-residence at the Johns Hopkins University Foreign Policy Institute, he is a Pulitzer Prize-winning, former New York Times correspondent, author, and creator of major television documentaries.

I am especially honored that Mr. Smith is able to join us again today, after participating last month as moderator of the historic National Education Summit which was convened by Secretaries Riley and Bell, the current and former heads of the U.S. Department of Education, and myself.

I am also pleased to announce that Mr. Smith has published another monumental book this week, entitled, "Rethinking America." This enlightened new book should be required reading for anyone who cares about education and the future of our country. It expands on Mr. Smith's documentary series, "Challenge to America," which shows how innovators in America, Japan and Germany are making schools, business, jobs and people work more effectively to meet the challenges of the new global economy.

Rick, it is a pleasure to have you with us again, and again I want to thank you for the efforts you have made for this country and comment you for your recent book.

STATEMENT OF HEDRICK L. SMITH, FOREIGN POLICY INSTITUTE, JOHNS HOPKINS UNIVERSITY SCHOOL OF ADVANCED INTERNATIONAL STUDIES

Mr. SMITH. I thank you very much, Mr. Chairman, for your kind remarks. As always, it is a pleasure to be with you.

I welcome the opportunity to talk about an issue that I have learned from my travels around this country is far more important than many issues that get a larger spotlight here inside the Belt-way, and that is the education of the vast majority of our average American high school students.

Americans take great pride in being number one, and so it was reassuring last year when the World Economic Forum of Switzerland reported that for the first time in nearly a decade, the United States was once again the world's most competitive economy.

But that praise was accompanied by a warning. The World Economic Forum warned that America's global economic leadership would erode in the future unless the United States devoted more resources and higher priority to worker retraining and a more effective education of America's youth for global economic competition, as your charts and comments showed at the start of this hearing.

That estimate is echoed by many of America's most thoughtful business leaders. From large corporations such as Ford Motor Company, Motorola, and Ashland Oil Corporation of Kentucky, to the Chamber of Commerce in Tulsa, OK, to small banks in rural Missouri, or little industrial firms in Georgia or Minnesota, I have heard chief executives complain again and again that all too often, they found that the American high school diploma is in their words "not worth the paper it is written on."

The high cost of America's educational shortfall has been underscored by CEOs such as IBM's Lou Gerstner who in a recent book, "Reinventing Education," cited a survey by the National Association of Manufacturers that—and these are really striking statistics—30 percent of American companies cannot reorganize work activities because employees cannot learn new jobs, and 25 percent cannot upgrade their products, because their employees cannot learn the necessary skills. So the skills and the education sit there right at the heart of business.

By Gerstner's estimate, which was more conservative than yours, I noted, corporate America must spend $30 billion a year on remedial education—and I have heard other estimates up to $200 billion—for its new workers. And American industry is losing another $25 to $30 billion each year because of the low levels of worker literacy. Says Gerstner: "We cannot squander $60 billion and remain competitive." And your figures were even larger, so that underscores the point.

The implications are clear: A much more effective partnership between business and education is critical to our economic future as a Nation, our standard of living as a people, our quality of life.

America is justifiably proud of its college-level education, but educators tell us that roughly 70 percent of America's young people do not complete 4 years of college, and that 70 percent is the backbone of our future workforce.

Business leaders assert that now and in the foreseeable future, roughly 70 percent of the jobs in the American economy will not require a 4-year bachelor's degree. But a high-performance economy does require a much more effective education than what most American high schools are now providing the average teenager.

Global competition has put on enormous pressure in high tech manufacturing and the service industry for workers who can operate computer-run machines, paralegals, radiologists, engineering technicians, medical technicians, technical workers for research and science, a brighter, more versatile, computer-literate generation of employees for service industries across-the-board. In other words, modern, high-tech industry needs high-skilled people to a far greater degree than ever before. So a mushrooming need is out there.

American industry is crying out for American education to supply many more world-class workers at the high school level, and that is what is important. Yet a serious gap remains—the educational shortfall underscored by the World Economic Forum.

The most innovative American businesses, educators, and local communities have discovered that a solution to that educational gap lies in forging a close partnership between business and education. And before the hearing, I had the pleasure of meeting some of those who are here today, forming that kind of partnership. Typical of American industry's drive to regain global leadership, these American innovators have sought out the best practices worldwide, which is worth underling—the best practices worldwide—ready to learn from anyone, even from foreign competitors.

In rethinking education, American innovators in place as diverse as Wisconsin, Maine, Pennsylvania, Oregon, Boston or Tulsa have taken a leaf from Germany's book, and it is worth taking a moment, even in precious time such as yours. In Germany, roughly two-thirds of the Nation's teenagers take what the Germans call "dual education," that is, combining classroom learning with training on the job.

This is not mere vocational training in a school shop class in the school building. It involves several years of high school age students working right in the factory, or in the bank, or in the hospital, or the newspaper, or the insurance company, or the electronics giant, trying to learn a trade or a profession.

In 400 different career fields, German business and the public school system have collaborated to fashion world-class education and training—physics classes that help a future auto worker understand robots; economics and finance classes that fit modern banking; chemistry classes that help a young printer learn ow to put up to 20 colors of ink and design on all kinds of surfaces with precision and clarity.

The German example has been taken as an inspiration in a variety of American States and cities in the past few years. Wisconsin began a dual-education apprenticeship-style program for high school students in its globally-oriented high-tech printing industry just in 1991. The first experiment was such a resounding success that the program has quickly spread to banking, insurance, health care, electronics, engineering, tourism, auto technology and general manufacturing.

From a handful of print ships and 21 apprentices in two communities in 1991, Wisconsin's youth apprenticeship program has spread to 200 businesses training 450 students from 85 high schools all across the State this past year, and the program is set for another quantum jump next fall.

Pennsylvania, Maine, Arkansas, Massachusetts, Northern New York State, have similar programs underway. California and Oregon have a local variation—high schools that include career academies with close links to local businesses. In Boston, the hospitals and the financial industry have mounted a dedicated effort to educate and train inner-city youth for careers in their fields. In Tulsa, the lead has been taken by the Chamber of Commerce and the machine tool industry.

Far-sighted American companies like Motorola, Boeing, and Xerox have mounted new partnerships with high schools in their immediate areas to upgrade education for the average students—the average students—not as a matter of altruism, but as a matter of enlightened self-interest.

Mr. Chairman, to me as a reporter going around the country, the most striking thing is the enormous enthusiasm for these programs for all the participants, from the business leaders to the teachers to the parents to the students. You find kids who are now excited about learning, kids who previously were turned off. And that is an enormous change.

So the idea of a business-education partnership is beginning to take root, but many people simply do not know how to begin. In many areas of our country, the gulf between business and education is enormous. They speak different languages they have different concerns, they eye each other warily. They go their separate ways, and then they wonder why business is unhappy and education is chastised.

It is also worth noting that the Council of Education of the States reports that fewer than 5 percent of America's 110,000 schools have begun fundamental education reform, and no more than one to 2 percent have actually completed 5 or 6 years of reform. So that while there is a lot going on, there is an enormous amount that needs to take place.

Rethinking education requires forging new relationships. It involves business and education accepting joint responsibility—something new for us—joint responsibility for educating all students, for educating and training a large majority of average American teenagers—the mid-kids who are not college-bound, the ones who showed up on those charts of yours as not being qualified to move into that global economy.

This rethinking of education means sitting down with each other to find common ground, to come up with money and ways to rewrite school courses, to train industry mentors, to retrain teachers, to devise both industrial and educational standards that meet the test of global competition—in short, that offer the best practices in the world to America's young people.

Where this has been attempted in a small number of States and communities, the results have been so strikingly successful that early experiments are spreading. But nationwide, the effort is still very modest. By comparison, to go back to some of the numbers you cited, West German industry spends about $15 billion a year on its apprenticeship training programs. If you take their population and compare it to ours, American industry would have to be spending $60 billion a year. And isn't it interesting—that is the $60 billion that Lou Gerstner, the CEO of IBM, said American industry was now wasting because it has to do remedial education, and it is unable to upgrade its own products and its own processes because its workers are not skilled and educated enough to carry out the higher-tech, more modern, more globally competitive practices.

Instead of losing that money on lost opportunities, or spending it on remedial education, wouldn't it make much more sense to spend the money up front on a world-class dual education system that would build a more solid future for the American middle class, the American economy as a whole, and our children and their future?

Thank you very much, Mr. Chairman.

Senator JEFFORDS. Thank you very much for another superb statement.

I want to concentrate on where you left off, and that is with the problems of replication. We have 110,000 schools, K through 12, in this country, and I would be amazed if even one percent are doing that well—I hope they are, but going from one percent to 100 percent is going to take a maximum effort on the part of business and educators.

Again, going back to the figures, when 55 percent of the kids who graduate now are functionally illiterate, and that does not include the 10 or 15 percent dropouts—a huge number.

I have been getting myself into trouble with Washington, DC because I point out similar statistics in the District. Five years ago, they made a study, and they said if you accomplish these certain goals, educational outcomes will improve. Well, a few of the schools did those things, and we have about three or four schools now that are really good; but the others went down, and I am afraid similar things are happening around the country. And I am also a little concerned to hear that Wisconsin is rather piqued because the "leader of the cause" has left. A lot of these initiatives are driven by one business, one man or woman, who is really extraordinary and can see the way.

So how does this country in the near future get its act together so that we can see the kinds of improvements that are needed? As you know, we have Goals 2000, which is very controversial—why, I am not sure—but how do we get there, what do we do?

Mr. SMITH. Well, I think you have hit on the absolutely critical problem. As Governor Thomas Kean, the former Governor of New Jersey, remarked to me, the problem in the 1980's, as he put it and many others have, was trying to devise ways to generate the best practices, a world-class education, and particularly for these average kids, because for the college-bound we have done very well for a very long time.

We now have the models—you have some here from Boston and from Boeing Company, and from other places, Tennessee, northern New York State, Wisconsin, and others. The reason issue is how do we replicate, how do we multiply, how do we get up to a scale where this is beginning to make an enormous amount of difference.

Let me just share what I have heard as a reporter—because I am certainly not an expert in these fields; I am just sharing what other people have told me. Again and again, people will say that seed money and collaboration are absolutely critical—the collaboration being local business, but often national business—the American Electronics Association, the American Printing Association, the American Insurance Association, the American Banking Association, American Business Roundtable. Having large organizations like those, particularly those that cut nationwide, take part in the concept in pushing this kind of dual education and also in helping set the standards is absolutely critical—a comment that Lou Gerstner made that you cited in your opening statement. Business has to underhand that institutionally, it is about the only force that is really pushing this kind of change, apart from individual community groups or individual parents or individual foundations and so forth.

The second thing is that it is very difficult for people to break down barriers. Teachers are uncomfortable with business people coming into the classroom. Business people are uncomfortable doing more than, say, doing volunteer work at the school or giving outmoded or outdated computers to the school. That is what I mean when I said not being altruism, but being enlightened self-interest. So it is terribly important for the business people to begin to see that they need to engage and overcome some of these barriers. And then, of course, the politicians need to get involved, public policy people.

And finally, it takes money. It may not take an enormous amount of money, but particularly at the beginning, this is the kind of thing where you are in a start-up effort. It is venture capital that is important. A businessman is looking at this and he says it makes sense, but which one of his senior workers is he going to use as a mentor to train the high school apprentices, and is that worker prepared to be a mentor? He may be an excellent worker, but does that worker know anything about teaching? Well, you may have to run a short course—maybe not a very long one. And where is the money going to come from. The business person is already putting out a certain amount for the apprentice. He is going to give the workers time. So training for the mentors, and training for the teachers to reorient the courses, developing a new kind of curriculum as well.

It is not large amounts of capital, but some kind of seed money is important here, and the people who have gotten started—as I notice in reading some of the other statements—have depended on foundation grants here and there. If we are going to get it up to scale, we are going to have to decide that this is nationally as important to us as it is to the Germans, or to other countries in Europe, and we are going to have to put some kind of national commitment behind it.

We may not be talking about big bucks, but something which helps break the ice, start the process, and get the momentum going is clearly something that has been important in some communities that I have been to around the country.

Senator JEFFORDS. I think you may have already answered this in part, but the inertia within the existing school systems, at least in my experience, is so hard to combat, and that is certainly the case here in Washington, DC. You have built-in teachers' unions, set-ups that are used to dealing with things one way, not used to meeting with business people, and do not know how to reach out. How do we overcome that?

Mr. SMITH. That seems to be something that is handled, from what I have seen, differently in every local or State level. There is no single formula.

In Tulsa, OK, for example, it was the Chamber of Commerce that became most exercised and worried about this, and it took them well over a year, a year and a half, sitting down with local high school principals and administrators and junior college administrators to persuade them that there was something here that needed to be done in the educational system. That is probably the biggest hurdle to overcome, and it takes leadership, it takes spokesmen—Governor Thompson of Wisconsin has certainly been a very important leader in this, as have some other political leaders. I understand Governor Weld is doing more in Massachusetts than he was initially.

So there are individual political leaders who have to help break the ice. And I think the other thing is shared experience. If there is a successful experience in Wisconsin or Massachusetts or Pennsylvania or Maine—the former Governor of Maine was very important in this process to getting it going—using those leaders to go around and help other communities to score that breakthrough is terribly important. It is hard to break through with the educators, but what is interesting is that if people can begin to perceive this as an opportunity and an exciting chance to rethink and rekindle their whole approach, rather than seeing it as a threat to their jobs—because in fact it is not; it is actually an uplift—if they can be persuaded to see that, what you find is that teachers begin to turn around, and they begin to grab hold of it. But that is a very difficult learning and adjustment process.

Senator JEFFORDS. In your book, you spend a considerable length of time on what are cultural differences, but really educational policy differences, in the primary grades, grades one through 6 in particular. How can you be sure to bring all of the young people along in the learning process and not leave many behind?

You point out how our system seems to reward the bright ones, but that in Japan, there is a tendency to have the bright ones bring everybody else along, at least up through the first grades, in order to make sure they are not left behind.

Mr. SMITH. What is interesting is that when you talk to Americans—and I am sure you have run into it, too—about the kind of dual-education system focused on the noncollege-bound that I have been talking about and that you are going to talk about through the rest of this hearing, many Americans will immediate react by saying, "That is tracking. We do not want to do that. That is tracking, and that is unfair. It is particularly unfair to the kinds who are to wind up in there." I would contend that it is a lot more fair than leaving them in general education, which does not prepare them for anything.

But what is interesting is that as you talk to educators and travel around other countries, Germany and Japan in particular, which I looked at as well as the United States, we actually begin tracking students far earlier than any other major industrial countries. We grade from first grade on. If you go into a German school in first and second grades, there is no grading; there are no academic grades. They do not put emphasis on that. If you go into Japanese schools in the first 4 years, they put very little emphasis on academic grading. It sounds odd; it certainly is not what I expected because there is so much academic pressure by high school. But they believe it is very important, both of those countries, and in other countries as well, to bring along all the students, to set high expectations for all the students, to see the potential of all those students, to get them involved in the kind of group learning around tables, collaborative education, which is similar to the modern workplace, where there is a great deal of shared work, whether you are on an auto assembly line or whether you are working in an insurance or banking office. There is a lot of shared work. They put much more emphasis on acculturation, on socialization, on bringing everybody along—but they also set very high standards.

And somehow, what is striking in the Japanese system is that without putting a great deal of stress on grades in those early years, and by working very hard to make every kid—every kid—feel at home and keep up with the crowd. They do not let the fast kids go that much further ahead than the rest of them. They wind up getting higher academic results than we, who put much more emphasis on academic results and individual achievement.

Now, those are not my findings. Those are findings of experts—one particular book by Stephenson and Stiegler, "The Learning Gap," who have done extensive comparative testing.

Senator JEFFORDS. I will have to excuse myself momentarily. Senator Kennedy, if you want to proceed, go ahead. I will go over and vote and be right back.

Senator KENNEDY [presiding]. I have not had a chance to chair a hearing in a while. [Laughter.]

I am glad to see you.

Mr. SMITH. Thank you.

Senator KENNEDY. I will wait until Senator Jeffords gets back to introduce someone from Boston who is very much involved in youth training.

In terms of evaluation, one of the more recent emphases that we have seen in Boston is moving away from exams in terms of the total evaluation, based not so much on the individual results, but also trying to work together with a group or a team, members of the class, as well and doing evaluation over a continuing period of time.

I do not know whether you have looked into that. It seemed that in terms children in the earlier grades, you were looking at a broader perspective. I wonder if you have had any contact or know what any of these other countries are doing in their evaluation of children.

Mr. SMITH. Well, Senator, what I found—and it makes sense; I had just never stopped to think about it—but I found that it did not matter where I want, it did not matter what country I was in, whether I was in Asia or in Europe or in America, and it did not matter whether I was in Massachusetts or Oklahoma or California or Oregon—if the kids, particularly young people, who were not doing well academically, who were turned off, who were bored, who were taking general education courses that smacked of remedial English and not-very-touch math and a study hall and a tech course in some kind of science or shop subject, the minute they got introduced to an adult world, working situation, whether it was in a bank, or whether it was in a factory, or whether it was in a hospital, or whether it was in a newspaper, it does not matter where it was, the first thing was they began to be taken seriously by the adult world, and then they began to take themselves seriously. They then discovered that the adult world really cared about how they did in their academics, which for many of them comes as a surprise, particularly in America. In Germany and in Japan, employers ask to see the transcript; in America, that is a pretty rare episode. If kids get the message that employers are looking at grades, and it is going to affect their jobs afterward, that has an impact.

But the most important impact is to be taken seriously by adults, and then suddenly, they discover that the math class they are taking actually affects what it is they are working on, or that the chemistry class they are taking helps them figure out how to mix the inks and make them stick, or that the physics class they are taking with a bit of electricity helps them to work out the programming of a robot—and they begin to see the connection. And without there necessarily being an enormous stress on academic performance, academic performance starts to go up. Why? Because motivation changes. It is not that these kids are dumb. They are turned off. The regular school system is not delivering something that is getting the best out of them.

And what is particularly fascinating is to see the business reaction. You start going to businesses—I was out at the chemical company in Berkeley, CA not too long ago, and these people took some inner-city kids out of Oakland Technical High School in a health career academy—and they sort of did it out of the goodness of their hearts—you talk to the adults now, and they are so excited, they cannot believe it. They have never known kids like this. Ninety percent of these kids are blacks or Hispanics. They thought they were not up to the job. They figured out they were up to the job, and not only that, they like the kids, they have begun to relate to them, and it has made an enormous difference at both ends.

You will hear from one of your own bankers shortly about a high school kid taking on an enormously responsible job that everyone else would have assumed he could not take on.

What happens is that when you offer the young people the opportunity, when you engage them in a live situation, and you treat them as if they are adults, they respond. And these are kids that everybody has said, "We do not really know what to do with them. They are not headed for Harvard or for Cal Tech, they are not headed for Stanford."

You see, part of the difficulty is—and from what I have found out—is that all the incentives in the American system for the high school principals and the high school teachers is a great record on who they have gotten into college, and the rest of the kids who did not make it, you are embarrassed about, and you would just as soon not keep their records. Well, that is not fair to them, and they also happen to be the majority. So if you start treating them seriously and caring about them, lo and behold, they start to perform.

Senator KENNEDY. Did you form any impressions based upon the differences in the various ethnic cultures and traditions in terms of the classroom, because these observations are equally applicable and true with regard to a multidimensional group of young people, with all of the diversity you have in language and so on.

Mr. SMITH. I think what is interesting, Senator, is that the greatest difficulties that we face in getting effective dual education working in this country are cultural problems. When you actually look at the performance of the young people when you put them in that kind of situation, I do not think it seems to make much difference who the young people are. It does not matter if they are inner-city ethnics, or blacks, or Hispanics, or whether they are kids from a rural area, or whether they are white and from suburban areas. That does not seem to make a difference.

Where we do have a cultural hangup in America, as we were talking about just before you came in, is with teachers being worried about business getting interested and getting into education—"Wait a minute—that is our domain"—and business saying, "Well, it is really the job of the educators to educate the kids. Educate the kids, put them in the marketplace, and we will hire them."

Well, if you go to other countries—Germany, the Scandinavian countries, Japan and so forth—business and education work together, and that is where the cultural hangup is. It is not the cultural background of the young people. It is the cultural mind-set of the adult world that is a factor, at least from what I have seen.

Senator KENNEDY. I think that speaks to the School-to-Work programs, as you will hear, and we can talk about it later in the hearing.

Did you form any impression about service learning? We have increased activities in many school systems with service in the community, and there is a sense of trying to relate some of the curriculum to their real life experiences and doing it in a way which is academically both challenging and measurable. This is something that some of the colleges and schools are thinking about. I do not know whether you have commented or if it is relevant to your own experience whether these other countries are doing anything along those lines.

Mr. SMITH. One of the things that I found repeatedly in traveling to other countries—Asia and Europe, and particularly around America—is that the most innovative educators understand that they have to make education relevant; that one of the reasons why a lot of kids are turned off, and one of the reasons why education is not working, where it is not working—and by the way, we used to have quite a good system 20 or 30 years ago for the kind of world we lived in, but our world has changed—but one of the things these people will say—and I cite one in this book, "Rethinking America," Ed Myer, who is the principal founder and director of Central Park Elementary School in New York, which has an extensive community service program, has an extensive internship program—is that the worst thing you can say to a kid about school is that is: "It is academic. You have got to do it to complete a course requirement. You have got to do it in order to get to the next class. You have got to do it in order to get a diploma."

So what they have found is effective, and what they are trying to do is not to use that as the spur or the motivating force, but to say it is relevant to life, so we are going to make you get out—and every kid in that school does 100 hours of community service—every kid. And this is in Harlem, with an 80 percent black and Hispanic student body; typical dropout rate, 50 percent. And the graduation rate from this school is 95 percent; the college entrance rate out of those graduates is 90 percent. This is Harlem. One hundred hours of community service for every kid; a semester of work internship for every kid.

Now, this is not a school-to-work program. This is a standard high school where they take all the kids in the area, and the only requirement for admission is that you are at grade level, and one of your parents will agree to engage with the school, will come to parent meetings—must come. What they have found—just as with the school-to-work programs that we have looked into—is that relevance and getting into the outside community is absolutely critical to not only exciting the students, but in the end, exciting the teachers. The kids come back turned on. The teachers get turned on. There is an electric process that begins, and it has a wonderful and positive chain reaction. And the tragedy is in some ways that this story is not better-known. You have some wonderful examples coming on later this morning, but they are examples that are known in their areas, and the word is not out to a lot of America that this is doable, it is being done, it is important, and it has powerful, powerful results.

Senator KENNEDY. What is your sense about the principal resistance? Is it just bureaucratic resistance, institutional resistance from the education forces?

Mr. SMITH. I think there are two or three things. There is certainly bureaucratic resistance. But I think we need to look at our own philosophy. We have a philosophy that everyone will take care of himself, that it is up to the kid, and it is up to the kid's parents, that it is up to the young man or the young woman to do it.

Well, a lot of people are lost. A lot of parents do not know what to do. They are having trouble relating to their teenagers on any problem, let alone the future of their lives—Senator, you and I know something about that as fathers; it is not always that easy to talk to kids about this kind of stuff. And the guidance counselors at the high schools are all oriented toward the college-bound. So beginning to address some of these questions and accepting the notion that more parties ought to be involved is very hard for us, and there is a lot of resistance there. The guidance counselor is going to say, "Wait a minute. All my glory is in the college-bound. Do you mean I have really got to worry about these other kids, find them jobs?"

I talked to one high school principal outside of Kansas City, MO, where we followed some kids. There is a young fellow named Jason Fuller whom we followed—a very average, typical high school kid who was not headed for college. We found out he was in an after-school work, short-order-cook kind of thing. We had been down there for several weeks and looked into this story, and I asked the principal, "How do you think this kid and all the others like him are going to stack up to an 18-year-old in Germany or an 18-year-old in Japan in terms of competing in the world economy?"

He looked at me, and he asked, "Do you mean the high school is going to be responsible for finding this kid a job? That is his responsibility. That is his family's responsibility."

So I think it is not just bureaucratic. It is part of our philosophy that it is up to the individual. So that if we begin to understand that through collaboration and partnership—you get the business involved, you get the teachers involved, the principal involved, the community involved, the parents involved—the parents were involved in designing some of these programs as well—we begin to find that there is a very powerful force at work.

Senator KENNEDY. One thing that strikes me in a lot of these school situations is that it is just not "cool" to be smart, and kids almost have to apologize for being interested in books and in academic achievement. It has probably always been that way, but it seems to be more prevalent today, and maybe some of the other witnesses will comment on it. It is obviously a cultural factor, but how do you deal with that kind of thing?

Mr. SMITH. That is a great question because you are absolutely right. The kids who are the core that you want to reach with the kind of programs you are talking about are precisely the kids who either feel inadequate because they got tracked back in 2nd grade and 3rd grade and discovered they were not good academically. Those kids got a message early on that they were not good, so their defense is it is not cool. It is not just a teenage attitude that has come out; it is something that the adult world has projected on the kids early on in their school experience.

But one of the great things about these practical programs is that they are not bookish. On the surface, they look as though you are out there doing something practical, and it is not books you are working on. The books kind of sneak in the back door. As I was saying before, the kid is in the hospital, and he begins to understand that if he is going to keep track of these fancy machines, or if he is in a bank, or he is running a computer, in order to do that, he has got to understand the math—so suddenly, the math is not a book subject that he has got to learn; in order to be successful in the adult world, with these coworkers who are now taking him or her into the job, he or she has got to pay more attention to the academics, so the academics kind of sneak in, and you begin to break down that resistance not by hitting it head-on, but by coming around the side.

Senator KENNEDY. Thank you, Mr. Chairman.

Senator JEFFORDS. Should I check to see if you did any damage to my reasoning here, Senator? [Laughter.]

Senator KENNEDY. Not at all. I am anxious to look at the book; it sounds fascinating.

Senator JEFFORDS. You should; it is incredible. It is wonderfully well-done.

Senator KENNEDY. I am a great admirer and have read most of Rick's other books and always found them informative. I am really glad you are here, and I am sorry our other colleagues cannot be here, because this is important testimony.

If I could, Mr. Chairman, just mention a word about my colleague from Boston, and I will ask that my introduction be included as part of the record.

Senator JEFFORDS. Of course.

Senator KENNEDY. Mr. John Hamill is president of Fleet Bank in Boston, and he has truly been one of those individuals who has really challenged the educational system—and I see other friends from Boston who are here as well—to bring the business community into an active partnership, in one of the most successful programs that we have in Boston, which is the ProTech program, where business and the schools are working together in the area of financial services. These are complex and responsible positions where a missed cued word here or there can have all kinds of implications in an enormously high-powered, important, significant and extremely successful business.

We have had the good opportunity to visit the training programs, and John Hamill has really been a leader in Boston and has been doing a terrific job.

So at an appropriate place, Mr. Chairman, if I could have my brief remarks of introduction of him placed in the record.

Senator JEFFORDS. Your statement will be so included.

Senator KENNEDY. I have 2 minutes remaining to vote, so that is what our lives are like around here.

Thank you very, very much.

Senator JEFFORDS. Thank you very much, Senator.

Mr. Smith, there is one other area I want to talk about with you, again coming from your book, and that is the relationship between workers and management, how to get along, and how to improve productivity through cooperation.

You draw some inferences from the early learning situations and the differences between our Nation and Germany and Japan as to how workers and management cooperate, and how the learning starts. I wonder if you could just go through that for us?

Mr. SMITH. Well, what was interesting to me is that I really begin not thinking I was going to look so heavily into education, and yet the roads lead inevitably to education. What obviously happened in the global economy in the last 10, 15, 20 years radically changed the nature of relationships in the most effective businesses and companies and institutions in the world, starting with Toyota, in some people's thinking, starting with the German apprenticeship and craft tradition, to other people, and just starting in modern American high-tech industry and others. But what happened was that people discovered that if you want to have an effective industry, not just mass production, large-volume, low cost, that if you actually wanted to be agile and drive up productivity and quality, you had to give more and more responsibility lower and lower in the factory or in the bank or in the newspaper, whatever. You had to give responsibility to people who were right out there, doing the job, because they were the people who were making the car or producing the service or whatever it is you were putting out in the company, and they were the ones who were going to have a direct impact on the process.

Furthermore, they were the ones—and I remember talking to Don Peterson, the former CEO of Ford, and he said, "Yes, we finally discovered the problem at Ford was management. We were trying to run everything from here, and we were mistrusting the worker. And what we really needed to do if we wanted to get higher-quality cars, lick the defects problem, improve productivity, and become more efficient, was to go and ask the workers how to do it—they had loads of ideas."

Well, what that means is that you need a thinking, participatory worker in whatever field you are in. It does not matter whether you are talking about the white-collar service industry or the blue-collar manufacturing industry. In fact, those distinctions in the modern world, with all the technical workers there, really do not pertain. But no matter what industry you were in, you had to give more responsibility down at that lower level, and you had to have a thinking worker, a participatory worker.

Well, that is not where American education was gauged. American education was directed and targeted historically toward what General Motors produced, which is an enormous volume cars, where the person did exactly the same thing every, single day, all day long, 10 hours a day, 48 weeks or 52 weeks a year, without thinking about it, without ever being asked by the bosses what to do.

The minute you turn it around and say those are the people who can help improve your productivity and quality, then you need to begin a dialogue, and then you need a higher quality worker. That is what I think is driving many businesses to say, "Hey, education is our front line."

That is why Lou Gerstner is complaining about not being able to upgrade the process. That is why they are spending $30 billion, or $200 billion, or whatever the estimate is, on remedial education, because they have discovered that the old educational system is not doing it. So what is going on is that part of the educational system is working in the old way, and business is trying to make up here, and there is this gap. That is the gap we need to close.

But the gap has arisen not because we in America were dumb or slothful or deliberately inconsiderate. We just were not paying attention to the nature of the changes that were taking place in the global economy and their implications for our basic high school education.

So what has happened in the workplace and in the global economy, at least as I learned it from folks who were right out there on the front line, is having direct impact on what we need from education. And the changing nature of relationships in the workplace—the greater responsibility of the worker, greater delegation, greater decentralization, and all kinds of enterprises—means you have got to have everybody operating better.

Now, the Germans and the Japanese were quicker to catch on to that than we were, particularly because we had such an advantage in innovation, in technology, in invention. We keep leapfrogging everybody by inventing something new. They come along behind us, and they say, well, the Americans invent it, but we will make it faster and better. And they got very good at that, and we felt the impact in the 1980's. That is the revolution that is now playing out through our educational system.

Senator JEFFORDS. We have got to move on, but I want to get into one other area just briefly. We talked earlier about the problems of replication, being able to move the inertia and so on. What role have you found in your experience for modern Information Age technology and the utilization of new learning techniques through the utilization of computer technology? Do you see evidence that that will give us a chance for leap forward?

Mr. SMITH. Well, there is a great fascination for that, and there is no question if you travel around American schools today that you find many more computers, all the way down to first and 2nd grade; you find them even in inner cities as well as in fancy, suburban, "blue stocking" districts.

So there is no question that that has become a factor, and I think probably we are ahead of some of our global competitors in the use of computers. But the problem I found is whether or not that is hooked up to human learning and the human interrelational skills.

In other words, Americans have a tendency to rely on technology and say that technology will lick the problem. That is what General Motors thought would beat the Japanese in the 1980's, that we would just robotize everything, we would just computerize everything, and we would leapfrog them. That is clearly important—but it is only a factor. The teachers have got to be reoriented. The teachers who are teaching with computers have got to be reoriented. The programming has got to be effective, not redundant, and imaginative to help the kids learn in ways that are relevant to the outside. They have got to be paired in with other kids so they learn the teamwork skills and so forth.

So I would say yes, from what I saw and from what people told me, there is something to be gained there. But there is a risk that we will suddenly say, Oh, well, the computers and the technology will do it all, and we can relax. That would be the gravest mistake of all.

Senator JEFFORDS. Thank you very much. Again, I want to commend you on your book. It is probably the best-documented book that I have ever seen on such a difficult subject. You spent many, many hours on it—can you estimate how many hours you spent?

Mr. SMITH. I do not know how many hours, but I spent 3½ years putting together the "Challenge to America" series for PBS and writing the book "Rethinking America." So I would say about 3½ years. If you can figure the hours—I do not work a 40-hour week, Senator—nor does anyone else in this room, I know.

Senator JEFFORDS. Thank you very much. I look forward to working with you in the future.

Mr. SMITH. Thank you so much.

Senator JEFFORDS. Our second panel is comprised of witnesses who will testify about the efforts of large national corporations or groups of large corporations and their efforts in vocational education. Carver Gayton, Ph.D.—I know Senator Gorton wanted to be here and introduce you, and he may yet arrive—Dr. Carver Gayton is corporate director of college and university relations for the Boeing Company. Prior to his tenure at Boeing, Dr. Gayton worked as a professor of public administration, a university director of affirmative action, a special agent for the FBI, and a high school teacher of history and English. Dr. Gayton has served on a wide variety of national, State and local boards and is recognized as an expert on global education issues.

Next, Rebecca Taylor, Ph.D., is formerly a New York City junior high school principal and has been the executive director of the Vocational Foundation since 1984. Having earned a bachelor's degree from Duke University and a master's in education from New York University, Dr. Taylor earned a Ph.D. in language literacy and learning from Fordham University. During her time at the Vocational Foundation, Dr. Taylor has been an effective fundraiser and administrator. She has also been extremely innovative in developing new programs in education, most notably with the development of the "Moving Up" demonstration project.

Dr. Gayton, please proceed.

STATEMENTS OF CARVER C. GAYTON, CORPORATE DIRECTOR, COLLEGE AND UNIVERSITY RELATIONS, THE BOEING COMPANY, SEATTLE, WA; AND REBECCA J. TAYLOR, EXECUTIVE DIRECTOR, VOCATIONAL FOUNDATION, INC., NEW YORK, NY

Mr. GAYTON. Thank you, Mr. Chairman.

It is a distinct honor and pleasure to have the opportunity to be before you this morning.

Until the late 1980's, The Boeing Company's support to colleges and universities was focused for the most part on 4-year institutions. While this continues, the company recognizes the need for industry to be more actively involved in improving education, skills and employability of the 75 percent of our youth who will not complete a 4-year college education, in other words, a baccalaureate degree.

Boeing has developed and implemented a school-to-work effort that promotes and supports the nationally recognized tech prep programs. A tech prep program combines a high school and community college competency-based curriculum in applied academic and vocational technical courses that leads to an associate degree in technology.

These programs prepare students for entry-level jobs in the workplace as well as for continued education that could lead to advanced degrees.

Boeing's involvement in the tech prep program is being done in two phases. The initial phase was to help build the applied academic foundation of the secondary school system. The next phase was to promote the development of a statewide manufacturing technology degree program within tech prep and provide a work-based student internship program related to manufacturing technology.

With regard to the first phase, which went from 1990 to 1993, the company's approach to support and promote tech prep was to first provide funds to establish applied academic programs in various high schools throughout the State of Washington, as well as funds to local community colleges to develop articulation agreements with those schools to allow students to earn college credit while in high school—to earn credit toward the associate degree.

Boeing is so committed to tech prep that it provided over $3 million during the initial 3 years to help develop the tech prep in the Pacific Northwest. The primary elements included providing seed grants for 59 high schools throughout Washington State implement applied academic programs, which include principles of technology, which is basically an applied physics program; applied mathematics; applied communications. Most of these kinds of programs comes out of the Center for Occupational Research and Development.

A second element was awarding articulation grants to community colleges to create a tech prep partnership between the high schools and community colleges in curriculum development, which allows juniors and seniors in high school to take courses which would provide credit toward an associate degree.

Initiating a summer high school teacher internship program was also one of our efforts in this first phase, which gives applied academics teachers compensated experience in a manufacturing workplace environment that could be taken back into the classroom.

In our second phase, we focused on developing a manufacturing technology degree program, which started in 1993. In January of 1993, Boeing and representatives from other industries, labor, education and State government, formed an ad hoc committee chartered to promote and support the development of a manufacturing education program for Washington State's existing and future work force.

I think it should be pointed out with regard to this committee that we did not have any blessing from the State government, from the legislature, or whatever. This was a grassroots effort.

This group assisted the community and technical colleges in developing a manufacturing technology degree program that will teach students the broad and basic skills required to effectively function in today's increasingly complex and competitive manufacturing organizations. These initial efforts resulted in State approval in 1994 of the first ever competency-based technical degree, which requires students to demonstrate both knowledge and skills. In other words, we are not talking about the amount of Carnegie units that they get, the amount of seat time they have in the classroom; they have to demonstrate what they know.

The group's activities include identifying the basic manufacturing entry-level skills; soliciting the involvement of other manufacturing firms in the State; advising the secondary and community and technical colleges of a core curriculum that responds to industry's needs; determining methods of measuring and evaluating the students' attainment of competencies; and developing a recommended process of how industry can effectively become involved in tech prep.

This organization, now called the Manufacturing Technology Advisory Group, or MTAG—we have about 17 manufacturing companies that are involved in this effort—has recently been awarded a $429,000 grant from the National Science Foundation to support curriculum development in both the high school and community college systems in Washington State.

In February of 1993, The Boeing Company approved a summer internship program for students enrolling in a manufacturing technology program. This program provides students with three progressive summer sessions that are offered in between their 11th and 12th, 12th and 13th, and 13th and 14th academic years, in other words, going on into the community college level.

The objectives of the summer internship program are to introduce students to career opportunities in manufacturing, teach basic factory skills and to assist in selecting specialty fields within manufacturing. Our primary concern is to be able to provide a broad-based understanding of the whole area of manufacturing. The sessions are being coordinated with high schools and colleges to ensure that the instruction complements the students' academic courses.

I have a graph here that I would like to explain—I think all of you have copies of it—but I would like to explain how this internship program operates.

First of all, you have a clear pathway of study, and that pathway of study with regard to our program is manufacturing. Then, the assumption is that there will be career awareness from kindergarten through the 10th grade—they will have an understanding of a variety of careers that are out there. And then, beginning at the end of the 11th grade, they will come into The Boeing Company and take basic manufacturing courses—this is the work-based learning effort—with emphasis on career exploration and basic shop classes.

Then, they go back into school, and at the end of the 12th grade, the courses they are taking will complement what they have already taken in the internship, and they will have an intermediate manufacturing experience, work-based experience, with the focus on intermediate shop practices and specialty exploration—for example, if they want to go into plastics, or if they want to go into electronics or into machining, they would begin looking at those specialties within manufacturing.

And then, at the end of the 13th grade, that is, after their first year of community or technical college, they would have another experience, the advanced manufacturing experience, and the number of hours doubles from what they had previously, and they will have a mentoring and shadowing experience. Then they go back into the community college and finish up with their degree, and they will be ready to go, coming into companies like The Boeing Company.

The intern program began in the summer of 1993, with 25 students and is expected to reach over 300 students by 1997. We have about 200 coming in this coming summer. Concurrent with the student intern program, the company will continue the teacher internship for secondary and 2-year colleges that was started during phase one. The teacher internships have been expanded from 20 to the current level of 35 educators from the participating high schools and colleges. Boeing's investment in the tech prep and applied academics programs since 1990 has exceeded $5 million.

In conclusion, I believe it is critical that tech prep funding continue to support our efforts and tech prep activities throughout Washington State. Through continued support of the Carl Perkins tech prep funding, we can be assured of highly skilled students completing a manufacturing technology associate degree.

Boeing is one of the Nation's largest exporters, and for us to maintain a technical edge and to maintain our position as the world's number one aerospace company, it is important to continue tech prep support.

Of the various educational reform efforts, tech prep has one of the best chances of becoming a truly collaborative partnership amongst educators, labor, government, and business and industry.

Thank you very much for this opportunity to share The Boeing Company's position on tech prep.

Senator PELL [presiding]. Thank you very much.

[The prepared statement of Mr. Gayton may be found in the appendix.]

Senator PELL. We now turn to Dr. Taylor, please.

Ms. TAYLOR. Thank you very much.

I would also like to express my appreciation to you, Senator, and to the other members of the committee for your interest in Vocational Foundation. We need strong advocates in this field, and we value your support and interest.

I am delighted to have the opportunity to address the subject of the business role in Vocational Foundation and share with you the information, insight, and successful approaches our organization has developed after almost 60 years of experience in preparing young people for employment and finding them jobs.

First, I would like to give you an overview of our organization. Then I will describe one of our very successful approaches to vocational education, and identify business' role in that approach. Finally, two very strong recommendations will conclude my testimony.

Vocational Foundation was one of the first organizations in the country established to help young people find jobs and join the work force. Established in 1936 in New York City, interestingly enough by a group of businessmen, to help youth with uncertain futures obtain employment and thus gain self-respect and self-sufficiency, the organization today provides vocational education and job placements services for out-of-school minority youth from New York City's poorest neighborhoods. Eighty-three percent are high school dropouts, 50 percent are welfare recipients, and at least 32 percent are teen parents. We work with approximately 800 to 1,000 youth each year.

We might be categorized as an alternative education program, a community-based organization, or a social service organization, but basically, we are a front-line, direct service organization preparing minority, economically disadvantaged youth who are high school dropouts for entry-level employment and future careers.

The program that I am going to describe today was developed primarily to help out-of-school youth gain employment, but the model can be used equally as successfully with in-school youth.

This particular approach is called "Moving Up: A Career Advancement Program." It has been highly successful, I am delighted to report in this age when so many negative reports are being presented about vocational education and training programs. And when I say it is a successful program, I want to define the ways in which we are measuring success.

Given the fact that our board of directors and our organization has a businesslike approach, our outcomes are very solid and very measurable. We look at such specific things as the number of young people placed in jobs, wages earned, number of months on the job, promotions, number obtaining a diploma, number of college enrollments, and percentage of young people remaining drug-free, child-free, and crime-free.

This approach that we call Moving Up has four components, and I am very pleased to say that in many ways, the model really represents the dual-education approach that Mr. Smith addressed earlier; so on a small scale, we are moving in that direction.

The first component is classroom training. During the 3 to 5 months of classroom training, young people are in classes 8 hours a day, 5 days a week, fully immersed in employment-focused classes on computer skills, social and communication skills, problem-solving, business English and math, industry-specific technical skills, career path, and industry trends.

During the classroom day, a typical work day is replicated or simulated by having trainees attend classes from 9 a.m. to 5 p.m. and dress in appropriate office attire.

The second component, implemented after the 3 to 5 months of classroom training, is placement in a full-time private sector job. In these jobs, young people generally earn between $5 and $12 an hour initially—and that rate is usually directly related to the level of skill they have acquired during their training and the specific field in which they have participated in classroom training.

The third component of this program, which is the one that I want to address most specifically today and emphasize, because it is a feature that is most unique and is sorely missing in so many of our programs, is weekly job coaching after job placement by a career advisor who is a full-time VFI professional counselor.

This weekly job coaching after job placement continues for at least 24 months to help the young person keep the job, gain additional skills and education, and advance along a career path.

The career advisor, as you might imagine, helps the young person resolve work-related problems involving supervisors, peers and assigned tasks, address personal crises that interfere with steady work performance and attendance, gain further training, education and/or experience needed to move ahead and attain raises and promotions.

The range of job coaching activities includes job site visits, brief conferences with the young person's supervisor, meeting the youth for lunch, telephone counseling after work or on the weekend, and evening and weekend social and cultural activities to build a peer support network and maintain contact. Evening workshops for skills upgrading and additional educational training are offered also at VFI twice a week.

The fourth component of this program is continuity with a caring adult throughout these 3 years of training activity. And interestingly enough, many of the apprenticeship programs last for around 3 years, so the fact that our activities are sequenced for approximately the same period of time is somewhat interesting.

Results of this approach obtained to date indicate that the Moving Up model is effective in helping inner-city youth join the work force and become economically self-sufficient. For example, a comparison of data from the pilot project and data from the Job Corps model, as well as other available comparison data, indicates the following.

Between 24 and 32 percent of Job Corps participants completed vocational training, and 16 percent obtained a high school diploma or general equivalence diploma. In comparison, information for inner-city youth in the Moving Up pilot project indicates 91 percent of those enrolled in the classroom training completed that training, and 53 percent earned a general equivalency diploma. These results really represent significant achievement and are substantially higher than the results achieved through the Job Corps model.

Similarly, the job placement goal set nationally for federally-funded youth employment programs is 41 percent of enrolled participants. But 93 percent of the first group of Moving Up participants were placed in jobs.

Also, particularly in New York City—and perhaps this is a national standard—55 percent of the youth placed in jobs lose those jobs within 30 days; however, with this approach called Moving Up, 69 percent of the participants were employed for more than 12 months. In other words, they were employed at the end of the 12-month tracking period, and we are looking at the number of months that they have remained employed since this time.

Within this approach, businesses have played the role of providing resources, guidance, and job opportunities. Employers and industry representatives have served on industry advisory boards involved in developing, evaluating and revising classroom curricula; provided teachers and administrators with information about the requirements of the workplace and career advancement as well as industry trends; arranged internships; hired program graduates and encouraged other employers to hire young people; and worked cooperatively with the VFI career advisors to help each young person succeed on the job and earn a promotion or a salary increase.

The value of this approach is that it can work within the country's economic system as it exists today. It does not require the creation, approval, and financing of a nationwide formal apprenticeship system. Moreover, it does not rely on employers for participation or success, or ask much of employers.

This is particularly significant in light of a survey of 4,000 companies that found that less than 5 percent were involved in any work experience or work-learn program.

Other advantages of this approach are an emphasis on guided experiential learning in the workplace, and second, a learn-and-earn approach that permits youth to earn and income while gaining job skills and additional postsecondary education and/or training.

On the other hand, there are obstacles to implementing this approach on a wide scale. Currently, there are few if any Government dollars available to provide the critically important 2 years of job coaching after job placement. VFI has implemented this aspect of the component solely with private funds obtained from foundations and corporations to date.

Also, Government funds for classroom training have already been drastically reduced. We were informed as late as yesterday that 50 percent of our current funds for classroom training would be eliminated as of July 1st. This means, obviously, that we can serve less than half of the young people that we are currently working with.

Moreover, the shift to block grants may mean that all of these funds are eliminated eventually.

Despite the current bleak picture for vocational education and work force development programs for youth, I would like to conclude my testimony by identifying the two most important roles businesses can play in such programs if these programs continue to exist.

First, business can and must provide quality work experience opportunities through internships, job shadowing, part-time or full-time employment, so that at least 50 percent of vocational education activity occurs outside classroom walls, whether school walls or college walls. I want to say that again and emphasize that repeatedly. Even the best-designed, best-run classroom program cannot duplicate real world work experience, and it is absolutely critical that the majority of vocational education and job training preparation occur outside any classroom setting, even the best classroom setting.

Hopefully, future legislation will provide business the opportunity to play a role in providing this work experience.

Second, business should play a convening and advocacy role in generating national interest on the part of educators, Government officials and parents, in building a work force development system and creating an environment in which youth employment and vocational education programs will have the same value, prestige and importance as academic college preparatory programs.

Thank you.

[The prepared statement of Ms. Taylor may be found in the appendix.]

Senator PELL. I must ask you to excuse me for a roll call vote. I just want to express my joy that this hearing is being held and congratulate the chairman on holding the hearing and ask that, without objection, my statement be inserted in the record.

[The prepared statement of Senator Pell follows:]

PREPARED STATEMENT OF SENATOR PELL

Mr. Chairman, I commend you for holding a second hearing on the reauthorization of vocational education. Today we will focus on a key issue: the relationship between vocational education and industry. As we seek to integrate academic and vocational skills, we must also seek to translate those skills into real life experiences. Partnerships between schools and businesses—students and professionals—can often provide the necessary catalyst to translate chemistry classes into future careers.

In my home state of Rhode Island, Dupont de Nemours & Company, Inc. and the William M. Davies Jr. Career and Technical High School have developed an innovative partnership based on a solid principle: a mutual commitment to life-long learning. They share resources and expertise in a collaborative effort to meet the needs of students, schools and local and regional business and industry. Due to the partnership, Davies can offer high-level, state-of-the-art instruction to its students and Dupont can nurture potential employees.

To my mind, partnerships such as the Dupont-Davies are right on the mark: They provide a world-class education for our students to become future leaders in the global work force. I look forward to the testimony from our witnesses and thank the Chairman again for holding this hearing.

Senator JEFFORDS. We have a tag team here, so we can keep the hearing going.

Dr. Gayton, in your testimony, you mentioned that Boeing made the focus of its educational investments on tech-prep and school-to-work in the late 1980's. Why did your company decide to make this a priority and how much does Boeing spend on these efforts?

Mr. GAYTON. Mr. Chairman, in relation to the last part of your question, as indicated in my remarks, up to this point with regard to this particular program, we have spent about $5 million over the last 5 years.

With regard to higher education, which I can speak to more directly, I guess we spend about $4 million a year for those kinds of efforts.

Senator JEFFORDS. Is that a total of $9 million?

Mr. GAYTON. A total of $9 million—that is with regard to the higher education, and then the $5 million. And we have support for K through 12 education, which would probably be around another $3 million, so that would make it right around $12 million.

The reason why we got involved in this particular program in the late 1980's was because of the fact that the majority of people who come to the Boeing company are not necessarily those with baccalaureate degrees. So the question was raised by one of our senior vice presidents that we are doing all this work, and K through 12 education, with a focus toward those young people who will be moving on toward a baccalaureate degree, and we are doing all this business with regard to higher education—but what are we doing for those young people who are going into vocational technical programs? A lot of employees come into our company with that kind of background.

So the question was raised, and that is when we began looking at some other means by which we could impact on that particular group of folks.

Now, just to put this in perspective, between 1986 and 1991, we hired about 65,000 employees at the Boeing Company. Within that 65,000, 60 of them were the ages 17, 18, and 19—60 of them out of that 65,000. What that indicated was that the overwhelming majority of the people whom we were bringing into the company had had experience—they had been out of school for some period of time, and then they had gone on to some other companies and worked in those companies. So those were the individuals we hired, based on their experience, rather than concentrating on those who were coming directly out of the high school or even the community college.

Senator JEFFORDS. Has that investment paid off, and do you anticipate continuing it, or do you have hope that the schools will relieve you from that responsibility?

Mr. GAYTON. Well, again, as I indicated in my presentation, I think that with regard to assuring that we are going to have highly-skilled people coming to The Boeing Company and other similar kinds of companies, that we have to work collaboratively with the education community, with labor, with parents and with community organizations to ensure that we are going to be successful in this regard.

So we are pleased with the direction that we are going. We know that it is going to have to be a continuous involvement. It is not a matter of saying that we are going to put 3 or 5 years into this effort, and then we are going to stop. I think the general feeling among the leadership of The Boeing Company is that we have to sustain our efforts in working with the education community, with labor and with others to ensure that we are going to be successful in terms of having highly-skilled people coming into our work force.

Senator JEFFORDS. Thank you.

Dr. Taylor, the list of companies that you have among your supporters is very impressive—American Express, Chemical Bank, Con Edison, Turner Network Television, Arthur Andersen and Company, just to name a few. How do you go about recruiting businesses, and do the businesses that are presently supporters help you in recruiting other businesses?

Ms. TAYLOR. Our board members, who are brought primarily from the business community, reach out to their friends and contacts to involve businesses in participating with us.

We find that employers who have worked with us, who have had a successful relationship with us, who are very proud of the young people that they have hired and are pleased with the young people's performance on the job talk to other employers and advocate on behalf of the young people to encourage employers to take a more active role in really offering young people a chance.

I would like to echo again and support many of the statements that Mr. Smith made, because they were very much in line with experiences that I have gained after 15 years in the New York City School system, 5 of which I served as a junior high school principal, and now 10 years in the job training field.

Young people, when offered the opportunity to handle responsibility and to master high-level skills, will respond to that opportunity. If really treated with respect as adults and expected to achieve at high levels, the young people will respond, even if at any given moment, their skill level is relatively low.

We have found that employers who have accepted this premise and who have hired our young people have been pleased with the results, and they advocate on our behalf in terms of bringing more employers sort of into the fold to support this effort.

We also have on staff five employee relations specialists whose main job, again, 7 to 8 hours a day, is to contact employers to find out where positions are available, to advise our staff on the demands of the workplace and of employers' expectations, and then to match the skill level of each young person with the job requirements.

I would also like to support the recommendation of having job placement counselors in each high school. I think that that is particularly important.

I also just want to emphasize the sentiments of the other speakers that the degree to which we can have close cooperation between business and education will represent the degree to which we can have an effective work force, which I know is the point and purpose of today's hearing.

Senator JEFFORDS. Have you received any State or Federal funding?

Ms. TAYLOR. Interestingly enough, yes. About 60 percent of our funding is JTPA funding, which is disappearing rapidly. As I mentioned earlier, I learned just yesterday that the highly successful program that I was just describing that has generated such great results is in jeopardy. We expect that at least 50 percent of our funding will be eliminated immediately as of July 1, and with the switch to block grants, the entire future of our job placement effort is in jeopardy, which creates some degree of uncertainty, as I am sure you can imagine.

But I am also pleased to say that we have been very fortunate to gain a great deal of foundation and corporate support as well as individual contributions from the private sector. So that mixture of private and public funds has really let us put together this project that I was describing earlier, where we took the 5 months of JTPA-funded classroom training, which was obviously not producing the results that anybody wanted to see, and supplemented it with 24 months of weekly job coaching after job placement, to help young people, first, keep that job, which is a challenge—in all honesty, we find it is more difficult for a young person to keep a job once placed with an employer than in some cases it is to get him hired—but by supplementing the 5 months of publicly-funded JTPA classroom training with this 2 years of follow-up job coaching, which has a much lower cost than the initial classroom training, we have been able to help young people really become solid, productive members of the work force, so that the young people were pleased, and the employers were pleased.

But we do, to address your original question, have a mixture of public and private funding, and I think that is what has enabled us to be far more successful in terms of generating innovative projects. But I am pleased to say in light of today's conference that we have recently received a $2 million challenge grant from a corporation, Tiber Management Corporation, which I think again shows that possibility and hope that the business community will remain interested in this field and in helping young people make that transition from school to work, or from the streets to work, as is sometimes the case.

Senator JEFFORDS. I wanted to ask you how we can help other entities like yours form, and I think you have already answered it by saying not to cut off the funding.

Ms. TAYLOR. Exactly, exactly. Obviously, it is impossible to generate the results that you want to generate and to help young people make a transition from school to work if there are not adequate resources. The resources do not guarantee results, but you can be certain that without those resources, it is impossible to gather any results.

Senator JEFFORDS. We have got to move along—I understand we are getting moved from this room at 12:30. So I deeply appreciate your testimony, which was excellent and very helpful. I look forward to working with you in the future, and we will have some other written questions for you, if you do not mind.

Mr. GAYTON. Mr. Chairman, thank you very much. I would just like to mention also that I have some additional material from the Center for Occupational Research and Development, "Making Students Work-Ready." There are examples of several companies that have work-based learning experiences that relate directly to the tech-prep activities.

Senator JEFFORDS. I appreciate that very much.

Thank you both.

Our third panel consists of representatives from local and regional businesses which have been active and extremely successful in promoting business and school partnerships.

John Hamill has been president of the Fleet Bank of Massachusetts since 1992. Prior to joining Fleet, he spent more than 12 years with the Shawmut Corp. Mr. Hamill also serves on a number of boards and is chairman of the board of Pathway Health Network, the parent of Deaconess, New England Baptist, and three community hospitals. He is also the chairman of "The Challenge to Leadership," an initiative to encourage greater cooperation among business, Government, religious, labor, and education and civic leaders.

The second panelists are Earl Jaskol and Elizabeth Volard, together. Today's theme has been "the creation and support of partnerships," and our next witnesses will be testifying as partners and members of the National Council on Economic Education. Earl Jaskol is founder and president of J&J Flock Products and Film Tech Corporation, which began in 1980. He is recognized in the Lehigh Valley as an entrepreneur and community leader dedicated to advancing the highest standards in business and education, understanding the need for mutually beneficial partnership between business and the community.

Mr. Jaskol serves on the Guardian Advisory Council of the National Federation of Independent Business, the executive committee of the Northampton County Development Corporation, the board of directors of the Ben Franklin Partnership and Manufacturers Resource Center, and the board of directors of the Pennsylvania Council on Economic Education.

Elizabeth Volard is president of the Virginia Council on Economic Education. Prior to 1988, she was the director of the James Madison University Center for Economic Education. Ms. Volard has over 20 years' experience in economic education and adds international research to her credentials, having studied economic education in Scandinavia, Belgium, and Germany. She also serves as vice president of the National Association of Economic Educators and is a member of the board of directors of the Virginia Council on Economic Education.

David Adomyetz—Senator Frist wished to be here, and hopefully, he will be coming down—is regional director of sales and marketing for the Rogers Group in Nashville, TN. He has worked for the group, which produces construction materials for residential, commercial and highway projects, for 15 years. He also serves as a member of the steering committee of the Giles Company, the Tennessee Business and Industry Education Partnership, and the Tennessee School-to-Work Transition Advisory Group, and has coordinated the Rogers Group partnership in education effort with seven schools in Tennessee and Alabama.

[The prepared statements of Senators Frist and Kennedy follow:]

PREPARED STATEMENT OF SENATOR FRIST

Thank you, Mr. Chairman. I commend you for holding this hearing on the very important role that businesses can play in vocational education.

I would like to introduce Dave Adomyetz. Mr. Adomyetz is the regional director of sales and marketing for The Rogers Group, the largest privately held crushed stone producer in the United States. The Rogers Group is headquartered in Nashville, TN.

Mr. Adomyetz serves on the steering committee of the Giles County Tennessee Business/Industry/Education Partnership, and on the State of Tennessee's school-to-work transition advisory group. He is the coordinator of The Rogers Group's partnership in education effort with seven schools in Alabama and Tennessee.

Mr. Adomyetz, I welcome you here today and look forward to your testimony. I commend you and The Rogers Group for the good work you are doing in this area.

PREPARED STATEMENT OF SENATOR KENNEDY

It is with great pleasure that I introduce John Hamill, president of Fleet Bank of Massachusetts. Mr. Hamill exemplifies the leadership of the Boston business community in its efforts to support youth employment through the Boston Compact. More recently, he has lead Fleet Bank's efforts at integrating working and learning through Project ProTech. There are few in the country who will be as able to advise us on changes we need to make to improve the school to work transition for students.

John P. Hamill was named president of Fleet Bank of Massachusetts in October 1992.

Prior to joining Fleet, Mr. Hamill spent more than 12 years with Shawmut Bank Corp. as president, and before that he served as president and CEO of Bank One Trust Company. He began his banking career in 1965 as deputy general counsel of Chemical Bank in New York.

Mr. Hamill serves as chairman of the board of Pathway Health Network, the parent of Deaconess, New England Baptist and three community hospitals. He is a director of Liberty Mutual Insurance Companies. He also serves as chairman of the Challenge To Leadership, an initiative to encourage greater cooperation among business, government, religious, labor educational, and civic leaders. He serves on many boards in Massachusetts, and is also leading the group of New England business and community leaders whose objective is to bring the Summer Olympics to Boston.

Senator JEFFORDS. Mr. Hamill, will you please start?

STATEMENTS OF JOHN HAMILL, PRESIDENT, FLEET BANK OF MASSACHUSETTS, BOSTON, MA; DAVID ADOMYETZ, REGIONAL DIRECTOR OF SALES AND MARKETING, ROGERS GROUP, INC., ELKMONT, AL; EARL JASKOL, PRESIDENT AND CHIEF EXECUTIVE OFFICER, J&J FLOCK PRODUCTS, INC., EASTON, PA; AND ELIZABETH VOLARD, PRESIDENT, VIRGINIA COUNCIL ON ECONOMIC EDUCATION, ON BEHALF OF THE NATIONAL COUNCIL ON ECONOMIC EDUCATION, NEW YORK, NY

Mr. HAMILL. Thank you, Mr. Chairman.

I am John Hamill, president of Fleet Bank in Boston, MA. With me today is Mr. William Spring, who is the School to Career Leader on the Boston School Board, recently appointed by Mayor Manino in our city, and also co-chairs the Massachusetts School-to-

Work Task Force on behalf of Governor Weld. Mr. Spring is an expert and a member of the staff of the Federal Reserve Bank in Boston.

You have had such eloquent testimony here today that it would be difficult to enhance it, but let me at least from a personal perspective give you our recent experience with regard to the efforts in Boston.

I have been involved in a variety of school-to-work and educational efforts in Boston over the last 10 years, but through the Private Industry Council leadership in the most recent 3 or 4 years, we have begun a school-to-work program where teachers and workplace supervisors began meeting with one another to integrate lessons learned on the job.

We were very proud just last May when Chris Brady, a young man who was working at Fleet as part of the school-to-work program, was chosen to introduce the President of the United States here in Washington at the School-to-Work Opportunities Act signing.

Mr. Brady was asked what he did in the job, and he got a big roar from the crowd of assembled Congressmen, Senators, and the President in particular, when he said that his responsibility was making sure that the bank filed appropriately the forms with regard to large cash transactions. And I can tell you, as somebody who participated in a Senate hearing that was not quite as amicable as this one about 7 or 8 years ago, when banks had not filed those forms appropriately, that Chris Brady had a job that is very, very important to me, because if those forms are not filed properly, with the right information, our bank is in deep trouble.

We were very proud to have Chris work for us while he was in high school. He was part of a process that brought high school students to our bank in order to be able to have a more realistic work experience and job experience.

What we found, as Mr. Smith indicated—and Mr. Smith has not been in Boston, but he has been in other places in this country—is that the students who are working in our bank, and go back to their classrooms and have the experience that they have in our bank, find that their academic scores go up, that their interest level increases, and that they are then ready for jobs in our bank and in other organizations, jobs that are better jobs than they otherwise would have been able to have.

We are very, very proud of the program that has been put together. A number of the banks and hospitals that you mentioned—I chair the board of Pathway, which has Deaconess Hospital as one of its members, and we have a number of high school students working at the Deaconess Hospital as part of this program also.

All of this happened in a bipartisan effort. George Bush when President had youth apprenticeship pilots launched. As I mentioned, President Clinton signed the School-to-Work Opportunities Act. I think the payback on this is very important. These are not students who are coming to us who are being given grants. They are being paid for good work.

At a luncheon that I hosted where Chris Brady and the 22 other students who worked at our bank last year were honored, I brought together the principal of this high school, Tom Hennessey, along with the managers of our bank for whom these 22 students worked throughout the bank. I think the eloquence of their testimony to the fact that if everybody in the bank worked as these students did, our bank would do even better than it does today.

The fact that those managers are invested in these students, and in fact those students feel that if indeed they could have their friends look up to them in other ways that they look up to them because of their job involvement, they would be on top of the world because they feel that they have something that their friends would like to have and I think are acting as role models for.

So it is with great concern that we hear that Congress is thinking perhaps of repealing the School-to-Work Opportunities Act with little more than a year under its belt. My appeal is simple: Do not do it. Do not repeal that Act. And simultaneously, if in fact we are going to preserve the gains of this bipartisan initiative, even if it placed inside of a block grant or consolidation, I urge you to designate a certain percentage of the funds specifically to be used for school-to-work initiatives, to allow us to continue to do what we are doing.

The money that is coming is a small part of the total Federal budget, but the leverage of that money is enormous. One million dollars in the case of Boston has been leveraged many, many times over. We have created entities throughout the State of Massachusetts called regional employment boards, which act as the conveners for school and business and community colleges.

I think the program works spectacularly. You have had great testimony here from Mr. Smith about his travels around the country and around the world. This is a program that is just off the ground; it dies in 2001 a natural death; it is not a big bureaucracy. So I would urge you to keep it in place.

Thank you.

Senator JEFFORDS. Thank you very much.

[The prepared statement of Mr. Hamill may be found in the appendix.]

Senator JEFFORDS. Mr. Adomyetz, please go ahead.

Mr. ADOMYETZ. Thank you, Mr. Chairman. It is an honor for me to be here today.

Let me come from a different angle. Over the past 10 years, our company has noticed that the gap between the skills needed for students to enter the workplace and the skills that they have on graduating from high school has widened. Some of this is probably a result of the rapid introduction of personal computers into classrooms and the workplace, but a big part is also business' new focus on achieving high levels of customer satisfaction.

In our company, we have embraced the principles of TQM, total quality management. TQM says that we have a need to look at our input, our process of production, and the output.

We receive input in the form of material components to produce things, but we also receive people as new employees. This brings me to my being here today. It is easy to sit back and criticize our educators and say that they are not producing employable students, graduates that we need as business and industry.

However, TQM says that we have an obligation to advise, to educate, to inform, to do whatever we have to do to make sure that our suppliers or our vendors understand our needs, understand our specifications, understand our requirements.

So Rogers Group decided that we were going to take that approach into the schools and see if it was accepted. As a result, we have been accepted graciously in every school system for the most part. There are some people who are skeptical, some educators who say, We will never let business and industry tell us how to educate our students. But by the same token, our own managers a few short years ago would say things like, We will never let our customers tell us how to run our business.

Senator JEFFORDS. Excuse me while I run to vote.

[Senator Pell assumed the chair.]

Mr. ADOMYETZ. Today, we pay vast sum of money to get this customer feedback. We encourage customers to tell us how to run our business.

So I am here today to share with you some examples of the experiences that we have in the communities that I work in.

First, we have provided Giles County high school educators with the opportunity to come into our workplace, to experience as many aspects of our business as possible. We want them to fully understand the different job tasks and skills necessary to perform them.

We also want teachers to see the continuous training needed to stay current in each position. At Spot Lowe Vocational School, which is a small vocational school in Marshall County, TN, we provided a Marketing II class of seniors an advertising budget of $300 a month. The students have designed, scheduled and monitored the print advertising for our company for the past 8 months. Rogers Group has been the recipient of some very creative advertising.

The Spot Lowe vocational students have also been recipients of some experience that they will not forget. The vocational director of Spot Lowe said: "I have seen many classes come through here, but I have never seen a class mature as these kids have."

In each school, we provide lectures and instruction relative to the needs of business and industry today. There has been a stigma attached to noncollege-bound students. Many students say they will go to college when in fact the likelihood is quite low that they will even enroll, much less graduate.

We tell students a college education is impossible to replace. However, we encourage those who are undecided to work hard in high school, accept employment that is challenging, and continue their education.

You see, there are many companies like Rogers Group that will help them pay for their education. This seems to create a bridge for many of the students who are undecided.

We sponsor a journalism class at Giles County High School. This class uses our company as a lab for various experiences or projects and programs. We merely provide the students and faculty a place to test new ideas.

At Marshall County High School, we have provided an onsite classroom for the applied mathematics class. Our business is the production of crushed stone. The students measure our massive stockpiles of crushed stone. These measurements provide data necessary for us to calculate the volume of these stockpiles for our inventory records. These students also get a great lesson in life, the real life applications of some thought to be worthless formulas.

These experiences are partnership. We do not consider our involvement a donation. We have not provided any funds or resources without expecting something in return. We expect to encourage those students who are at risk of making poor decisions, to provide new insight to educators as to the skills we are finding most valuable today, to help remove the stigma from noncollege-bound students, to provide a smooth transition from school to the workplace, to recruit students in order to attract them to our business, to ensure our educators understand there are many jobs which are extremely important that do not require a college degree.

We too have some suggestions. We suggest that educators place a higher priority on written and oral communication skills. Each and very student needs to be computer literate. But we also suggest that TQM principles should be embraced by our educators, applied and taught.

In closing, we believe business and industry can improve the quality of education in our schools. We can make the education process more relevant to potential employment. Business and industry can work with educators to make the students and graduates today become the qualified, productive employees we will need in the future.

Thank you.

Senator PELL [presiding]. Thank you very much.

[The prepared statement of Mr. Adomyetz may be found in the appendix.]

Senator PELL. Mr. Jaskol?

Mr. JASKOL. Senator Pell, I am the co-founder and president of J&J Flock Products in Easton, PA. For the past 15 years, we at J & J Flock have been committed to building a better work force. We would like to share some of our experiences with the subcommittee in an effort to demonstrate the positive role businesses can play in supporting work force development.

Operating a business today is nothing like it was when we first started our business in 1980. Our manufacturing processes, our marketing efforts and our distribution systems have become fairly sophisticated, and they have to be or we will not remain competitive, and we employ 150 people who would not have jobs.

Nearly everyone in the business school ivory towers will tell you that to be successful in business today, you have to customize, you have to be agile, you have to continuously improve. But none of this is possible without a trained work force.

The days of hierarchical management are quickly drawing to a close. People are clearly the most important asset of any business.

When we started in the early 1980's, I as the founder of the company was expected to know all of the answers. Today I realize that my associates, our employees, know far more about their jobs than I do. We increasingly rely on their contributions to succeed in the marketplace.

To give you an example, in January, we formed an inventory reduction team comprised of sales associates, material managers, and warehousemen. These warehousemen were forklift drivers, people who load trucks, so I am not just talking about the higher levels of management. Their assignment was to slice $1 million off of our inventory. We are a small company, and that is a lot of money for us. They did so in less than 6 months, saving thousands of dollars and freeing up a lot of cash for further growing our business. It was a true team effort, and they are justifiably proud of the results they accomplished.

In 1994, my company became a member of the Pennsylvania Council on Economic Education, where I now hold a seat on the board of directors. The Pennsylvania Council is affiliated with the National Council on Economic Education, a nonprofit partnership comprised of leaders from education, business, and labor dedicated to promoting economic literacy and building a better educated and more skilled work force.

I am joined this morning by Elizabeth Volard, president of the Virginia State Council on Economic Education, who will explain a little more about how the national and State councils are working to better prepare students for today's demanding marketplace.

Our decision to join the Pennsylvania Council was based on our civic commitment as well as the economic necessity of assuring the availability of a trained labor pool. We hire local workers who are often graduates of our State education system. But too often, we find that these graduates have not had an education that goes beyond very fundamental skills in math, science and English. That is, they are not well-prepared to enter the modern work force.

We spend a lot of money training these people, but we are only a small company. We can train them in specific skills. We can train them in TQM and statistical process control, but we cannot give them the basic grounding in economic concepts that they would get if we could improve our educational system. What they get, they pick up on their own.

The Pennsylvania Council offers a range of support services to State and local education agencies designed to address this problem. This support includes curriculum development, teacher training, teaching materials and program evaluation, all of which are intended to help educators prepare their students to enter the workplace. Most recently, we have worked with the National Council to develop a comprehensive, multimedia curriculum designed to enable high school students to draw upon economic knowledge, to comprehensive complex marketplace issues and how they affect the workplace.

Students need to develop sufficient understanding of the causes and consequences of changes in production to understand rising and falling prices, employment levels and production capacity.

Citizens and workers need to understand why governments at all levels respond in certain ways to pressing economic problems. Without this knowledge, citizens fail to understand the actions of their government, and workers are likely to make poor workplace decisions based on faulty economic reasoning. Their companies, their jobs, their families, and ultimately the national economy suffer the consequences.

Senator, businesses are involved in this process because we realize the significance of building a better educated and skilled work force. Yet, for every J & J Flock Products, there are dozens of businesses that do not get involved.

I believe that federally-created incentives would do much to increase the business participation in the improvement of our local school programs. When educators look to real world businesses for support, the results will be an education program upon which students can build rewarding careers. And I have worked with many educators in our local area, and it is amazing to me that some of them do not have a clue as to the newer management methods and collaborative efforts that are occurring in business.

I understand that this subcommittee is considering proposals to more closely involve the business community in supporting improvements to local education and vocational programs. By authorizing the establishment of work force area development boards, as proposed in H.R. 1617, the Careers Act, you will provide additional incentives for even more businesses to actively support education reforms. Such incentives need not take the form of a tax incentive or other financial benefit; they should, however, include requirements for State and local education agencies to seek input from private sector organizations when developing curricula and designing education programs.

Providing a seat at the table for businesses will offer sufficient incentive.

Senator, I cannot overemphasize the important role businesses can play in the process of work force development. I urge you to build into your legislation opportunities for committed business leaders and other concerned local citizens to participate at the local and State levels. Through organizations like the Pennsylvania Council on Economic Education, business people are prepared to contribute to building a better work force. All that is needed is the opportunity to do so.

Thank you very much.

Senator PELL. Thank you very much indeed.

[The prepared statement of Mr. Jaskol may be found in the appendix.]

Senator PELL. Next, we are happy to hear from your associate, Ms. Volard.

Ms. VOLARD. Thank you, Senator Pell. It is good to see you again. I am glad to be here this morning.

I am Elizabeth Volard, president of the Virginia Council on Economic Education. The Virginia Council, like the Pennsylvania Council which Mr. Jaskol described, is affiliated with the National Council on Economic Education.

I am here to share with the subcommittee this morning how our organization develops and delivers programs which address the issues and concerns raised by leaders like Mr. Jaskol and the other business leaders who have spoken this morning.

The National Council on Economic Education is the Nation's most comprehensive economic education organization. Our mission is to prepare students to understand the economy and to develop the decisionmaking skills necessary for participation in an increasingly competitive world marketplace. In order to accomplish this mission, we provide teacher training courses—that is in-service. It may be 2 hours after school, or a 3-day workshop, all the way up to graduate courses at university centers for economic education.

We also provide economic education materials and programs. These materials and programs are designed for kindergarten through grade 12, and they are across the disciplines in math, science, language arts, and other areas of the curriculum.

We also develop curriculum materials, set standards, and evaluate economic literacy. All of this works together, a five-pronged approach, to institutionalize economic reasoning within the curriculum.

The goals of the National Council are to prepare students in grades kindergarten through 12 to become responsible citizens, productive members of the work force, productive members who know that they can invest in their own human capital and become more productive throughout their working lives.

We also have goals to provide training for knowledgeable consumers, prudent savers and investors, so that students will become effective participants within the global economy, and that they will be lifelong decisionmakers. Economics does that for us. It allows us to apply economic concepts and economic reasoning to any issues that we have to face in our lives, whether that be as consumers, or in the workplace as employers and employees, or as citizens in the voting booth.

The National Council has a network of State Councils on Economic Education, each of which maintains a network of university-based centers for economic education. Through these university-based centers, economic education courses, programs and services reach thousands of teachers and many multiple thousands of students in communities all across the Nation.

The National Council, State councils and our network of centers work in partnership with business, labor, education and Government. In Virginia, we have partnerships with corporations—DuPont, James River, Union Camp, Southern States—with the Consumer Credit Counseling Service of Virginia, with the Virginia Housing Development Authority, and also with the Virginia legislature. We are truly a partnership of businesses, labor, education and government working together to develop materials as well as to fund the programs.

These partnerships are very essential to the successful preparation of students for the work force. Together we can achieve success.

According to a recent survey by the Gallup organization, American adults, high school and college seniors know very little about how the American economy works. The National Council in partnership with the Agency for Instructional Technology, is developing a course entitled, "The Economics of Work." This program is an interactive, computer-based program to help students understand the workplace and to apply economic decisionmaking skills to their roles as employees.

Harold Durrett, former plant manager of Walker Manufacturing in Harrisonburg, VA, stated: "Employees with a basic understanding of our economic system are better citizens and more productive workers." His company employed students who graduated from schools using the Virginia Council's economic education programs. These employees understand the economic environment and the executive decisions that have to be made in a corporation. How do they understand that? They have learned it all the way through school, from elementary, through junior high and into high school.

To give you an example, when I was a center director at James Madison University, I worked with the teachers in our locality. I went out to a school 1 day to visit a 5th grade class. The students had set up a production line—they had a business going in that classroom. They were making mouse bookmarks made of felt, with little yarn whiskers. Those students analyzed what was happening in their assembly line, and they realized that at the point where they had to attach the yarn to the mouse bookmark, their assembly line was bogging down, and they were not very productive.

So a little 5th grade girl came running up to me and said, "Oh, the economics lady is here. We have used some of our capital to increase our productivity." Now, this is a 5th grade student. She understood, and what they had done was to purchase a needle threader to help thread that yarn; that solved their problem on their production line, and they increased their productivity by investing in that capital.

Now, teachers all across the Nation have that kind of activity going on, but it is often producing something to sell at the book fair or at the school fair. They often do not have the economic concepts from the real world employed in that situation, in that simulation in the classroom. These teachers were teaching the students the proper economic technology and the proper economic decisionmaking skills in developing this little bookmark they were going to sell at the book fair.

So that is one example, and you can spread that across any number of classrooms at any grade level. We have had parents come to us who have said, "Thank goodness for your program. My child finally understands decimals and fractions and percentages," or "My child is really rushing to do research in the library on an economics project." Their eyes have been opened to the real world, and they see why they need to know some of these subjects that students may think of as boring—percentages and decimals—but in the real world, it makes a lot of sense to them.

As the subcommittee considers legislation to reform Federal work force development, I urge you to include mechanisms which encourage and strengthen these links to the business community.

To give you an example of one of the programs we are working on now and how we work together with business, with the Virginia Housing Development Authority, we are developing a new "Economics of Home Ownership" program to be included in a curriculum in the schools in Virginia. People from the building industry, real estate development and so forth are helping us to develop the curriculum. We have writing teams of people from our network from the centers and from the business community working with us to develop the materials, to have the correct information in there that would reflect what is going on in our communities, the careers that are available in the building industry, for example.

So that is one way that we are working together. The teachers then field-test those materials in the classroom and give us feedback on how effective they are. And the business leaders go into the classrooms and speak.

We apply that to every program we do in the State of Virginia, involving the business community in helping us develop the materials, the curriculum and so forth to meet the standards that teachers have to meet in the classroom, and to prepare them to understand the economy.

Providing opportunities for and encouraging private sector participation in the development of statewide strategies and local program oversight will be crucial in ensuring that students are learning what they need to survive in the workplace.

The discussion draft of the Workforce Development Act provides for business input in the reform process. In Virginia, we believe that that is a necessary step in the right direction.

We would further like to strongly encourage the funding and support and endorsement for teacher training be included—teacher training, material development and curriculum—so that we may really have a strong work force coming from our school systems in the future.

Thank you very much.

[The prepared statement of Ms. Volard may be found in the appendix.]

Senator JEFFORDS. Thank you all. This is exciting testimony. It is just exactly what we need to help guide our country and guide ourselves in designing the legislation which we are preparing right now to try to make sure that we help—although I know there is great concern about consolidation and block granting and so on, and Senator Kassebaum and myself are going to try to make sure that we take care of people's fears about what is going to happen—but that is not necessarily all within our ability because we have to work with the House as well.

We have 4 more minutes before we must leave this room, and I am not sure whether there is an operation out there to remove us or not, but we will find out.

How have your educational projects affected your companies' morale, and how have they increased overall productivity goes? What kind of feedback have you had from other business people? Is this something which is catching on in communities?

Mr. ADOMYETZ. Very much so, Senator. Our company was quite reluctant to enter into total quality management because it was new, and it was different, and it was not a comfortable zone. When we began working with schools, we began to understand that what we had just begun, the journey we had begun with TQM, the educational system has the same journey.

Now, one of the biggest benefits to working with schools has been that we as business and we believe educators as educators are about to understand that there are not two worlds anymore. There is not the world of education and the world of work—there is life—and we have got to come together. That in itself is making people feel positive, people within business and people within industry, because our previous thought, which had been that educators do not want to hear what we say, was not the case. So that is the biggest impact.

Senator JEFFORDS. Mr. Hamill?

Mr. HAMILL. I think the managers in our organization were skeptical at first, but now, as they see the quality of the young men and women who are working along with them, they believe that the stereotype of what they might have believed about the student who was in the inner-city school has changed dramatically. I think that has done more inside the company to enhance an attitude that is quite different from what might have been there before.

The business community in Boston, between the full-bore Pro-Tech program that I described, where students are there for 3 or 4 hours a day each day at our workplace, and the Summer Jobs Program, there are over 700 employers who are participating in one form or another in these programs.

So this is not just a fledgling effort in regard to getting entities involved. It has become a mission. We believe that Boston, MA is a manageable place, and that if it is going to survive into the 21st century in the way in which it survives today, that it is going to need to be able to transform itself. And our mission is to make sure that we transform it in a way that is productive for the companies as well as for the students.

Mr. JASKOL. Senator, there is nothing so exciting as watching a person who has been promoted from the ranks to a supervisory position who would have never thought of going back to school—it is an average high school student or less, possible—and to see him after a couple of years saying, "Hey, I want to go and get an associates degree"—and I can think of four people just offhand who are in that position—that is the most rewarding thing. It is happening, and I see it happening in other businesses that I associate with.

The process we are talking about has saved us a lot of money, and it has made us an organization that people like to work for. And as I said, it is extremely rewarding.

You mentioned earlier the effects that computers are having on the organization. We find in our small company that computers are providing so much information to process that it is making this situation that we are talking about that much more urgent, and that is the improvement of the education of our work force. There is a lot being done, but there is a lot more that needs to be done.

Senator JEFFORDS. Ms. Volard?

Ms. VOLARD. It is really exciting to see the light go on in a student's eyes when he realizes what happens in the real world, and he really is a part of the economy. And the important part for us in Virginia is that we have corporations and business leaders involved with us in developing programs that really work in the schools and provide them with the employees that they want in their work force.

I commend you for your efforts, and I surely hope that this will be a success.

Senator JEFFORDS. I appreciate it. What we have to do is find out how we can, as John F. Kennedy did, back when it became apparent that we were losing in world competition in space, generate the enthusiasm throughout the Nation. We have a similar situation now, except that it is much more difficult to describe than the drama of space technology; on the other hand, it is even more critical to our future. If we do not understand that competition is out there in the world, and that we have to worry about being better educated than other competitors in the world, and it is not just a question of whether Massachusetts is better than Virginia; it is a question of whether we are going to be able to compete with the huge markets that are opening up out there. There is such tremendous opportunity, and yet, gosh, it is hard to wake people up.

But you know how to do it, and we are going to learn from you. We deeply appreciate your testimony.

Well, the guards have not come running in, so I guess we made it all right without disrupting somebody else. But I want to thank all of you for very excellent testimony, and all those who have been here today and participated.

We are going to go forward and learn from you and try to do the best we can to wake up the country.

Thank you very much. With that, the subcommittee is adjourned.

[The appendix follows.]

APPENDIX

PREPARED STATEMENT OF DAVE ADOMYETZ

Rogers Group is the largest privately held crushed stone producer in the United States. Our primary business today is in the production of crushed stone and hot mix asphalt for paving. Over the last ten years, our company has noticed the gap between skills required to enter the work force and the skills which high school graduates possess has widened. Much of this is due to the rapid introduction of personal computers into the work place and a major shirt toward achieving higher levels of customer satisfaction. May businesses like ours have embraced the concept of Total Quality Management, or TQM.

A major part of TQM requires business to look at their input, the process of production, and the output, (the product). Not only do we receive input as raw materials or components, we receive people as new employees.

This brings us to my being here today. It is easy to sit back and criticize our educators for not preparing graduates for the modem workplace. However TQM says we have a obligation to work with, advise, and educate our suppliers until they fully understand our requirements and/or specifications.

Rogers Group decided to explore the acceptance of the educators in our markets to this type feedback and involvement. We are being received graciously in each and every school system by the majority.

There are some who are skeptical and declare they will never let business and industries tell them how to teach our children. However we can remember a few short years ago some of our own managers declared they would never let customers tell them how to run their business. Today our customers' feedback is the lifeline to continuous improvement.

I am involved in several programs in our Southern Middle Tennessee communities, and I am here today to share with you some of our experiences in our effort to become involved and provide feedback to our educators.

- We have provided Giles County High School educators with the opportunity to come into our workplace to experience as may aspects of our business as possible. We want them to fully understand the different job tasks and skills necessary to perform them. We also want the teachers to see the continuous training needed to stay current in each position. Likewise our company is sending qualified company employees into the teacher's classroom to experience their workplace.
- At Spot Lowe Vocational Center in Marshall county we have provided a Marketing II class of seniors a advertising budget of $300.00 per month. The students have designed, scheduled, and monitored the print advertising for our company over the past 8 months. Rogers Group has been the recipient of some creative advertising and Spot Lowe Vocational Center has a class of students that have experienced something may will never forget. The Vocational Director of Spot Lowe said "I have seen many classes come through here, but I have never seen a class mature as these kids have".
- In each school we have provided lectures and instruction relative to the needs of business and industry today. There has been a stigma attached to students who do not plan to go to college. Many students say they will go to college, but the probability is quite low that they will even enroll much less graduate. We tell students a college education is impossible to replace. However, we encourage those who are undecided to work hard in high school, choose a job that is challenging, and continue their education while they work. This seems to revitalize many students and instill new hope. We tell them may companies will help pay for their education as does Rogers Group. We are not the only company that will do this, and this information many times provides a bridge for the undecided.
- We sponsor a journalism class at Giles County High School. This class uses our company as a "lab" for many projects and programs. We merely provide the students and faculty a place to test ideas and gain first had experience. The most recent was a $900 Audio Visual presentation project. Most of the student's work airs on Community Access Television locally and the positive community relations we receive are phenomenal.
- At Marshall County High School we have provided an on site classroom for the Applied Mathematics class. The students measure our massive stockpiles of crushed stone. These measurements provide data necessary to calculate the volume of these stockpiles for our inventory records. These students also get a

great lesson in the real life applications of some previously thought to be worthless math formulas.

These experiences are partnerships. We do not consider our involvement a donation. We have not provided any funds or resources without expecting something in return.

We expect at a minimum:

- To encourage students who are at risk of making poor decisions
- To provide new insight to educators as to the skills we are finding most valuable today
- To help remove the stigma from non college bound students.
- To provide a smooth transition from school to the work site
- To recruit students in order to attract them to our business
- To ensure our educators understand there are many jobs which are extremely important that do not require a college degree

We suggest that educators place a higher priority on written and oral communication skills. Each and every student needs to be computer literate. TQM concepts should be embraced by our educators, applied and taught.

In closing, we believe business and industry can improve the quality of education in our schools. We can make the education process more relevant to potential employment. Business and industry can work with our educators to make the students and graduates today become the qualified, productive employees we'll need in the future.

PREPARED STATEMENT OF EARL JASKOL

Mr. Chairman, members of the Subcommittee, thank you very much for the opportunity to appear today to testify about the role of business in Building a Better Workforce. My name is Earl Jaskol, and I am co-founder and president of J & J Flock Products in Easton, Pennsylvania. My company manufactures flocked materials for ribbon and apparel, and plastic film for health care related products. For the past fifteen years, we at J & J Flock have been committed to building a better work force. I would like to share some of our experiences with the Subcommittee in an effort to demonstrate the positive role businesses can play in supporting work force development.

As the Subcommittee is well aware, the business environment continues to grow increasingly competitive. Operating a business today is nothing like it was when we first started in 1980. Our manufacturing processes, our marketing networks, and our distribution systems have become very sophisticated. They have become sophisticated for a very simple reason: if we fail to lead the market or even just to keep up with our competitors, we will go out of business, and the 150 men and women at my company will be out of jobs. This principle holds true across the entire business spectrum.

Nearly everyone in the business school Ivory Towers will tell you that to be successful in business today, you must adapt, you must improvise, and you must overcome. You can read that in Business Week or the Wall Street Journal every day. But the simple fact is, no business can do that without a well trained work force. The days of hierarchical management with decisions handed down from the top are drawing to a close. People are the most important asset of any business. Every associate in our companies has a chance to participate in day to day decision making. When we started in the early 1980's, I was expected to know all of the answers. Today, I realize that our associates know more about their jobs than I do. If we don't use the minds of every member of our organization to their fullest potential, then we won't be able to compete.

In January, for instance, we formed an inventory reduction team comprised of sales associates, materials managers, and warehousemen to slice one million dollars off of our inventory. They did so in less than six months, saving thousands of dollars and freeing-up cash for growing the business. It was a true team effort, and they are justifiably proud of the results. And I am proud of them.

In 1994, my company became a member of the Pennsylvania Council on Economic Education, where I now hold a seat on the board of directors. The Pennsylvania Council is affiliated with the National Council on Economic Education, a nonprofit partnership of leaders from education, business and labor dedicated to promoting economic literacy and building a better-educated and more skilled work force. I am joined this morning by Elizabeth Volard, President of the Virginia State Council on Economic Education, who will explain a little more about how the national and state councils are working to better prepare students for today's demanding marketplace.

Our decision to join the Pennsylvania Council was based on our civic commitment as well the economic necessity of assuring the availability of a well trained labor. We hire local workers who are often graduates of our state education system. Too often, we find that these graduates haven't had an education that goes beyond fundamental skills in such areas as math, science or even English; that is, they are not well prepared to enter the modern work force. Consequently, the time, money and effort we expend on training such workers puts us at a competitive disadvantage. This is particularly true on the international level.

We at the Pennsylvania Council offer a range of support services to state and local education agencies designed to address this problem. This support includes curriculum development, teacher training, teaching materials, and program evaluation, all of which are intended to help educators prepare their students to enter the workplace. Most recently, we have worked with the National Council to develop a comprehensive multimedia curriculum designed to enable high school students to draw upon economic knowledge to comprehend complex market place issues and how they affect the workplace.

Students need to develop sufficient understanding of the causes and consequences of changes in production to understand rising and falling prices, employment levels, and production capacity. Citizens and workers need to understand why governments at all levels respond in certain ways to pressing economic problems. Without this knowledge, citizens fail to understand the actions of their government, and workers are likely to make poor workplace decisions based on faulty economic reasoning. Their companies, their jobs, their families, and ultimately the national economy suffer the consequences. Our State Councils are currently working with state and local education agencies, area universities and colleges, and businesses to make our Economics at Work curriculum available to local high schools and state agencies through the School-to-Work Opportunities programs.

Mr. Chairman, businesses are involved in this process because we realize the significance of building better educated and skilled workforces. Yet for every J & J Flock Products, or every other business that actively participates in a state council on economic education, there are dozens that do not get involved. I believe that Federally created incentives would do much to increase business participation in the improvement of our local school programs. When educators look to real world businesses for support, the result is usually an educational program upon which students can build rewarding careers.

I understand that this subcommittee, and its counterpart in the House of Representatives, are considering proposals to more closely involve the business community in supporting improvements to local education and vocational programs. By authorizing the establishment of Workforce Area Development boards as proposed in H.R. 1617, the Careers Act, the House, for instance, you will provide additional incentives for even more businesses to become fully engaged in supporting educational reforms. Such incentives need not take the form of a tax incentive or other financial benefit. They should, however, include requirements for state and local education agencies to seek input from private sector organizations when developing curriculum and other educational reforms. Providing a seat at the table will offer sufficient incentive to encourage participation by businesses and other organizations that are truly committed to building a better work force.

Mr. Chairman, I cannot over-emphasize the important role businesses can play in this process of work force development. The privately-sponsored Economics at Work project is only one example of how a private sector organization like the National Council on Economic Education can partner with educational institutions to bring about needed improvements in the way we prepare students to make the transition to the workplace.

While reforming the duplicative federal work force preparation systems already in existence, I urge you to build into your legislation opportunities for committed business leaders and other concerned local citizens to participate at the local and state levels. Through organizations like the Pennsylvania Council on Economic Education, business people are prepared to contribute to building better workforces. All that is needed is the opportunity to do so.

Thank you very much.

PREPARED STATEMENT OF ELIZABETH VOLARD

Thank you very much, Mr. Chairman, for inviting me to appear here this morning. I am Elizabeth Volard, President of the Virginia Council on Economic Education. The Virginia Council, like the Pennsylvania Council Mr. Jaskol described, is affiliated with the National Council on Economic Education. I am here this morning to share with the subcommittee how our organization develops and delivers programs which address the issues and concerns of business leaders such as Mr. Jaskol.

The National Council on Economic Education is the Nation's most comprehensive economic education organization. Our mission is to prepare students to understand the economy and to develop the decision-making skills necessary for participation in an increasingly competitive world marketplace. In order to accomplish this mission, we provide teacher training courses, produce economic education materials and programs, develop economics curriculum, set standards and evaluate economic literacy.

The goals of the National Council are to prepare students in grades kindergarten through twelve to become responsible citizens, productive members of the work force, knowledgeable consumers, prudent savers and investors, effective participants in the global economy and lifelong decisionmakers.

The National Council has a network of state Councils on Economic Education, each of which maintains a network of University Centers for Economic Education. Through these university-based centers, economic education courses, programs and services reach thousands of teachers and their students in communities across the nation. The National Council, state Councils and the network of Centers work in partnership with business, labor, education and government. Together, they develop curriculum, programs and materials. These partnerships are essential to the successful preparation of students for the work force.

According to a recent survey by the Gallup Organization, American adults and high school and college seniors know very little about how the American economy works. The National Council, in partnership with the Agency for Instructional Technology, is developing "The Economics of Work," a comprehensive, practical economics curriculum designed to teach students to apply economic decision-making is ills, to their roles as employees.

Harold Durrett, former plant manager of Walker Manufacturing in Harrisonburg, Virginia, stated, "Employees with a basic understanding of our economic system are better citizens and more productive workers." His company employed students who graduated from schools using the Virginia Council's economic education programs. These employees understand the economic environment and the management decisions made by the company.

As the Subcommittee considers legislation to reform federal work force development programs, I urge you to include mechanisms which encourage and strengthen these links to the business community. To give you an example, providing opportunities for, and encouraging private sector participation in the development of statewide strategies and local program oversight will be crucial in ensuring that students are learning what they will need to survive in the workplace. The discussion draft of the Workforce Development Act provides for business input in the reform process. As such, I believe it is a necessary step in the right direction.

Thank you very much.

STATEMENT OF PETER COORS

INTRODUCTION

In 1990, Coors Brewing Company embarked upon one of the most comprehensive, long-term commitments by an American corporation to address this country's adult illiteracy problem with the creation of Coors "Literacy..Pass It On." Through this program, Coors has reached more than 550,000 adults with literacy services coordinated by our four partners, the nation's leading nonprofit literacy providers: Laubach Literacy Action, literacy Volunteers of America, Opportunities Industrialization Centers of America, and SER-Jobs for Progress. Coors "Literacy. Pass It On." has provided substantial financial support to our partners, funded and promoted a national hotline and awareness program, recruited volunteers and nonreaders, and generated funds for local literacy services.

Coors Brewing Company chose adult literacy because it impacts the communities in which we do business and affects all economic and ethnic groups, both men and women, and all geographic regions. In addition, unlike many societal issues facing America today, we can reverse the alarming trend; illiteracy is solvable.

During the past five years, Coors Brewing Company has learned a great deal as we listened to the program's new readers and to our national literacy partners' needs. We've learned that individuals become self-empowered by learning to read and that this personal growth is leading to employment opportunities. New readers often acquire the ability to read and fill out a job application, follow operating instructions for industrial equipment, or run a computer, a new requirement in today's high-tech workplace.

The success stories of adults who participated in Coors "Literacy. Pass It On." led Coors Brewing Company to develop a new literacy initiative in 1995—Coors Literacy Pays. This program addresses the issue of workforce literacy through an informational manual, an employer helpline and other related services, that will assist targeted businesses in developing basic literacy skills programs for employees.

NATIONAL PROBLEM

The literacy level of workers in the United States is critical to the success of business and industry. The increasing impact of lost wages and declining productivity is taking a significant toll on the profitability of small and large businesses alike. Several national studies have indicated that the cost of lost productivity alone may exceed $200 billion dollars a year. Many small- and medium-size companies are finding the costs of retraining their employees are staggering. Training budgets alone in 1995 will exceed $2 billion dollars. A steadily growing portion of these funds is being directed at remedial basic skills training and similar low level education.

Based on the latest National Adult Literacy Survey, it is estimated that nearly 90 million adults in the United States lack the necessary skills to function successfully in the workforce. These figures are based on the lowest two skill levels of the national survey which are deemed necessary for entry level positions. This reality creates a critical national problem that needs to be addressed at the federal, state and local levels. Clearly, private sector involvement will be an important element to the success of any major initiatives to address literacy in the workforce.

Coors Brewing Company has been addressing this issue over several years and we are continuing to build on our long commitment to worker training and retraining as well as our support of education in general. Given the magnitude of the problem and our experience with several national education and training partners, we believe that there are a number of important factors to consider.

KEY ELEMENTS TO COMPREHENSIVE SOLUTION

Drawing from our experience as a business leader and employer, and on our involvement in direct literacy provision, we feel there are a number of critical elements to successful workforce programs. These elements relate to our own work at various local sites as well as the experience of our national literacy partners. These partners, which include Laubach Literacy's Center for Workforce Education, Opportunities Industrialization Centers, SER-Jobs for Progress, Wider Opportunities for Women and others, provide us with sound educational programming through a collaboration of nonprofits, businesses, and state and local programs. We believe that this approach, which draws from the relevant expertise of the business community as well as from educational providers, stands the best chance of providing comprehensive solutions at the local level. These solutions require a significant commitment from all parties involved and need to focus specifically on the literacy needs of workers and employers. While these literacy needs can be focused on specific job requirements, it is important to underscore the critical nature of literacy as an invaluable tool for workers now and in the future. Our specific observations are as follows:

1. National leadership is critical to long-term solutions. We believe that national leadership from the Department of Education and the Department of Labor coupled with national business and education organizations is vital. This leadership needs to underscore the importance of literacy and the workplace. It should focus on providing awareness and stimulation to broad literacy efforts as they relate to the workplace and business success. National models to assist businesses in establishing their own programs and for supporting local and regional initiatives are going to be critical. These national models can be stimulated through private as well as public partnerships. Many existing models can provide a basis for new programs, but they will require documentation and dissemination. Programs already in existence in conjunction with Laubach Literacy, OIC, SER and others offer excellent opportunities for review and evaluation. This needs to done in concert with national initiatives that promote the need for increased basic training in the workforce.

2. Business incentives are an important stimulant to workforce literacy programs. Businesses of all sizes can benefit from incentives to address worker training and retraining. Clearly, the opportunity for increased profitability, improved service to customers, and general productivity gains offer excellent motivation for business and industry involvement. However, various types of tax incentives should also be explored and tested. Quality exploration of other tangible incentives should be explored and articulated. Many of these incentives will not require significant financial liability, but will offer greater motivation for business involvement.

3. Public/private partnerships are the key to maximizing financial resources. Neither business nor the education community can single-handedly address the critical problem of workforce literacy. It is important to take advantage of the expertise and experience of service providers as well as the unique perspective and support of business. The partnership of these two important sectors can together offer a greater degree of coordination than either can provide singly. The support represented by the business community and the education service provides is very significant and will allow for the mobilization of additional resources at the local and state levels. Various models of public/private partnerships demonstrate the importance of this element and the importance of encouraging it as part of any comprehensive solution.

4. It is critical that programs focus on basic skills for employees as opposed to only job specific training. Worker retraining will continue to be an important element of businesses, large and small, into the 21st century. It will be important that workers have the adequate basic learning abilities to adapt to new and more sophisticated working environments; workers need to be readily and efficiently retrained based on changing needs of industry. It is important that business address the long-term educational needs of the workforce and invest adequate resources for long-term return. Literacy instruction should be an important element of job retraining and needs to be distinguished from the more specific vocational job training and skill development. Both are critical to comprehensive educational approaches, but general literacy improvement requires that it be emphasized.

5. Finally, it is important that the business community takes an active role and a sense of responsibility to providing for workforce literacy. The ramifications of inadequately addressing this important problem will be detrimental to all businesses and industries. It is important that business play an active leadership role in workforce literacy efforts at the local, state, and national levels.

SUMMARY

The need to significantly improve the educational level of America's workforce has never been greater. Based on reports from businesses and the data collected from national studies, it is clear that our economic success will be determined largely by the educational health of our workforce. Coors believes that a coordinated partnership between the public and private sectors, focusing on the general literacy levels of workers, can provide comprehensive long-term solutions. We believe that these partnerships need to include all of those involved in this important work at the national, state and local levels.

Innovative models that focus on employer benefits, incentives and model programs can help make a major impact on this great problem and national challenge. National leadership at the federal level is important to help initiate and maintain this effort. Companies such as our stand ready to partner with others in providing additional guidance, leadership and support. We sincerely appreciate the opportunity to offer this testimony.

PREPARED STATEMENT OF CARVER C. GAYTON

Mr. Chairman and members of the Subcommittee, it is indeed an honor and privilege to have the opportunity to talk with you this morning regarding The Boeing Company's Tech Prep Program.

Until the late 1980s, The Boeing Company's support to colleges and universities has historically been focused, for the most part, on four-year institutions. Although this support will continue, the Company recognizes the need for industry to be more actively involved in improving the education, skills and employability of the 75% of our youth who will not complete a four-year college education.

Boeing has developed and implemented a "school to work effort" that promotes and supports the nationally recognized Tech Prep programs. A Tech Prep program combines a high school and community college competency-based curriculum in applied academic and vocational technical courses that leads to an Associate Degree in Technology. These programs prepare students for entry-level jobs in the workplace, as well as for continued education that could lead to advanced degrees.

Boeing's involvement in the Tech Prep program is being done in two phases: The initial phase was to help build the applied academic foundation in the secondary school system. The next phase was to promote the development of a Statewide Manufacturing Technology Degree Program (within Tech Prep) and provide a work based student internship program related to manufacturing technology.

Phase 1 - Building the Foundation (1990 - 1993)

The Company's approach to support and promote Tech Prep was to first provide funds to establish applied academic programs in various high schools throughout the State, as well as funds to local community colleges to develop articulation agreements with these schools to allow students to earn college credit while in high school. Boeing is so committed to Tech Prep that the Company has provided over $3 million during the initial three years to help develop Tech Prep in the Northwest. The primary elements included:

- Providing "seed" grants to 59 high schools throughout the State of Washington to implement applied academic programs
    - Principles of Technology (applied Physics)
    - Applied Mathematics
    - Applied Communications
- Awarding Articulation grants to community colleges to create a Tech Prep partnership between the high schools and community colleges in curriculum development which allows juniors and seniors in high school to take courses which would provide credit toward an associate of arts degree
- Initiating a summer high school teacher internship program which gives applied academics teachers compensated experience in a manufacturing workplace environment that can be taken back to the classroom

Phase 2 - Developing a Manufacturing Technology Degree Program (From 1993)

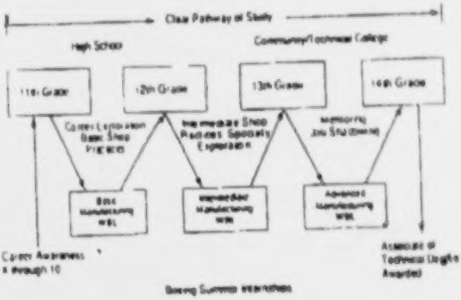
In January 1993, Boeing and representatives from other industries, labor, education, and State government formed an ad hoc committee chartered to promote and support the development of a manufacturing education program for Washington State's existing and future workforce. This group assisted the community and technical colleges in developing a Manufacturing Technology Degree program that will teach students the broad and basic skills required to effectively function in today's increasingly complex and competitive manufacturing organizations. These initial efforts resulted in state approval in 1994 of the first-ever competency-based technical degree, which requires that students demonstrate both knowledge and skills.

The group's activities include:

- Identifying the basic manufacturing entry-level skills
- Soliciting the involvement of other manufacturing firms in the State
- Advising the secondary and community and technical colleges of a "core" curriculum that responds to industry's needs
- Determining methods of measuring and evaluating the students' attainment of competencies
- Developing a recommended process of how industry can effectively become involved in Tech Prep

This organization, now called the Manufacturing Technology Advisory Group (MTAG), has recently been awarded a $429,000 National Science Foundation (NSF) grant to support curriculum development in both the high school and community college systems in Washington state.

In February, 1993 The Boeing Company approved a summer student internship program for students enrolled in a manufacturing technology program. This program provides students with three progressive summer sessions that are offered in between their 11th - 12th, 12th - 13th, and 13th - 14th academic school years. The objectives of the summer internship program are to introduce students to career opportunities in manufacturing, teach basic factory skills and to assist in selecting specialty fields within manufacturing. The sessions are being coordinated with the high schools and colleges to ensure that the instruction complements the students' academic courses.



The intern program began in the summer of 1993 with 25 students and is expected to reach over 300 students by 1997. Concurrent with the student intern program, the company will continue the teacher internship program for secondary and 2-year colleges that was started during Phase 1. The teacher internships have been expanded from 10 to the current level of 35 educators from the participating high schools and colleges. Boeing's investment in the Tech Prep and applied Academics Programs since 1990 has exceeded $5 million.

In conclusion, I believe that it is critical that Tech Prep funding continue to support our efforts and Tech Prep activities throughout Washington state. Through continued support of the Carl Perkins Tech Prep funding, we can be assured of highly-skilled students completing a Manufacturing Technology Associate Degree. Boeing is the country's largest exporter, and for us to maintain a technical edge and to maintain our position as the world's number one aerospace company, it is important to continue Tech Prep support. Of the various educational reform efforts, Tech Prep has one of the best chances of becoming a truly collaborative partnership amongst educators, labor, government and business and industry. Thank you for this opportunity to share the Boeing Company's position on Tech Prep.

PREPARED STATEMENT OF REBECCA J. TAYLOR

I'm delighted to have this opportunity to address the subject of "Business' Role in Vocational Education" and share with you the information, insight, and successful approaches our organization has developed after almost 60 years of experience in preparing young people for employment and finding jobs for them.

First, I'd like to provide you with a brief overview of our organization. Then I'll describe two of our very successful approaches to vocational education and identify business' role in each of those approaches. Finally, two strong recommendations will conclude my testimony.

Vocational Foundation, Inc. (VFI) was one of the first organizations in the country established to help young people find jobs and join the workforce. Established in 1936 in New York City by a group of businessmen to help youth with uncertain futures obtain employment and thus self-respect and self-sufficiency, the organization today provides vocational education and job placement services for out-of-school minority youth from New York City's poorest neighborhoods. 83% are high school drop outs, 50% are welfare recipients, and 32% are teen parents. 58% are male and 42% are female. We work with approximately 800 to 1,000 youth each year.

We might be categorized as an alternative education program, a community-based organization, or a social service organization. Basically, we are a front line, direct service organization preparing black and Hispanic economically disadvantaged youth who are high school drop outs for entry-level employment and future careers. We currently collaborate with the traditional school system in a variety of ways and will begin to use our approaches with in-school youth on a small scale in September, 1995.

Over the many years since 1936 we've developed, implemented, and assessed the effectiveness of various ways of helping young people both enter and succeed in the workplace. Consequently, we have worked with many employers in various fields.

The two highly successful approaches to vocational education that I'm going to describe today are called Moving Up: A Career Advancement Program, and JUMP (Joint Urban Manpower Program). Before describing those programs, however, let me add that we measure success in very solid, objective terms such as number placed in jobs, wages earned, number of months on the job, promotions, number obtaining a diploma, number of college enrollments, and percentage of young people remaining drug-free, child-free, and crime-free.

The first approach that we call Moving Up has the following major components:

1. Three to five months of classroom training that includes 8 hours a day, 5 days a week of immersion in employment focused classes on computer skills, social skills, communications skills, problem-solving, business English and math, workplace simulations, general employability skills plus industry-specific technical skills instruction as well as an overview of specific jobs within the industry, career paths, and industry trends and terminology. During the classroom training a typical work day is replicated or simulated by having trainees attend classes from 9:00 AM to 5:00 PM and dress in appropriate office attire.

2. Placement in a full-time private sector training-related job with a salary of $5.00 to $12.00 an hour.

3. Weekly job coaching after job placement by a Career Advisor, a full-time VFI professional counselor, for 24 months to help the young person succeed on the job and advance along a career path. The Career Advisor helps the young person resolve work-related problems involving supervisors, peers, and assigned tasks; address personal crises that interfere with steady work performance and attendance, and gain further training, education, and/or experience needed to move ahead and attain raises and promotions. The range of job coaching activities includes job site visits, brief conferences with the young person's supervisor, meeting the youth for lunch, telephone counseling after work or on the weekend, evening and weekend social and cultural activities to build a peer network and maintain contact, and evening workshops and classes at VFI twice a week.

4. Continuity with a caring adult (Career Advisor) for the three years of classroom training, on-the-job training, and/or education.

Results of this approach obtained to date indicate the Moving Up model is effective in helping inner-city youth join the workforce and become economically self-sufficient. For example, a comparison of data from the pilot project and data from the Job Corp model, as well as other available comparison data, indicates the following:

- Job Corps data indicates between 24% and 32% of the participants completed vocational training and 16% obtained a General Equivalency Diploma (Employment and Training Reporter, 1994). In comparison, information for inner-city youth in the Moving Up pilot project indicated 91% of those enrolled in vocational training completed training and 53% earned a General Equivalency Diploma.

- Similarly, the job placement goal set nationally for federally funded youth employment programs is 41% of enrolled participants, but 93% of the first group of Moving Up participants were placed in jobs.

- City-wide, 55% of the youth placed in jobs lose those jobs within 30 days while 69% of Moving Up participants remained continuously employed for more than 12 months.

Within this approach, businesses have played the role of providing resources, guidance, and job opportunities. Employers and industry representatives have 1) served on advisory boards involved in developing, evaluating, and revising classroom curricula; 2) provided teachers and administrators with information about the requirements of the workplace and industry trends; 3) provided internships; 4) hired program graduates and encouraged other employers to hire young people, and; 5) worked cooperatively with the VPI Career Advisors to help each young person succeed on the job and earn a promotion or salary increase.

The value of this approach is that it can work within the country's economic system as it exists today. It does not require the creation, approval, and financing of a nationwide formal apprenticeship system. Moreover, it does not rely on employers for participation or success or ask much of employers. This is particularly significant in light of this fact:

- A recent survey of 4,000 companies found that although 83 percent experience problems finding qualified entry-level workers and that 60 percent believe work experience is one of the best ways to develop better entry-level employees, only 5 percent were involved in work/learn programs.

Other advantages of this approach are 1) an emphasis on guided experiential learning in the workplace and 2) a learn and earn approach that permits economically disadvantaged youth to earn an income while gaining job skills and additional post-secondary education and/or training.

On the other hand, there are obstacles to implementing this approach on a wide scale. Currently there are few if any government dollars available to provide the critically important 2 years of job coaching after job placement. Moreover, with the possible shift to block grants there is a possibility that current government funds for the classroom training component may be eliminated as cities and states struggle to resolve financial crises. Hopefully, if a block grant approach is adopted, that approach will include some national standards that require that a certain percentage of funds will be allocated for workforce development programs for in-school and out-of-school youth.

Secondly, I'd like to bring to your attention another VPI program that has been very successful. This approach is not at all in line with the current prevailing sentiment of less government regulation and reduced government spending, but it has been successful, and it may offer some ideas for the role government and business can play in developing a school-to-work system. The characteristics of this approach called JUMP are:

1. **Mandated employer participation but with government reimbursement for most participation related costs.** Whenever the NYS Department of Transportation awards a contract to an engineering firm -- to build a road, tunnel or bridge -- the firm is required to hire a certain number of people as drafters or construction inspectors according to the dollar amount of the contract. As most of you know, it's the drafters, under the guidance of engineers, who provide most of the detailed drawings for sections of bridges, tunnels, and roadways. Construction inspectors are responsible for certifying under the supervision of the engineers, that the contractors have met the specifications of the engineering firms. The New York State Department of Transportation reimburses the firm for all training costs including the trainee's salary.

2. **A hire first, then train policy.** Vocational Foundation sends three potential trainees to each engineering firm that has been awarded a contract and has one or more trainee positions available. Each trainee who is hired returns to VFI for 12 weeks of classroom training. The trainee earns a full salary while in training and is guaranteed his job upon completion of training.

3. **12 weeks of classroom training supplemented with 12 weeks of on-the-job training provided by each engineering firm.**

4. **An official national credentialing component (NICET).**

5. **Strong industry support.** Representatives from engineering firms 1) develop, monitor, and revise the curriculum, 2) support and mentor trainees, and 3) advocate on behalf of the program with the New York State Department of Transportation and all engineering firms.

The two successful vocational education models I've described were designed primarily for out-of-school youth but could be used equally as successfully with students in school.

In summary, I'd like to identify the two most important roles that business can play in vocational education.

First, business can and must provide quality work experience opportunities through internships, job shadowing, and/or part-time or full-time employment so at least 50% of vocational education activity can occur at a worksite and outside of the classroom and school. Vocational education legislation should include a variety of incentives, financial and otherwise, to encourage business to provide this work experience.

Second, business can play a convening and advocacy role in generating national interest on the part of educators, government officials, and parents in building a workforce development system and creating an environment in which youth employment and vocational education programs will have the same prestige and importance as academic, college preparatory programs.

PREPARED STATEMENT OF JOHN HAMILL

My name is John Hamill. I am President of Fleet Bank of Massachusetts. For over a decade, I have been involved in the Boston business community's efforts to improve education for our young people and prepare them for career opportunities in the Boston economy. Just last May, we at Fleet were proud to have Chris Brady, an enrollee in Boston's ProTech youth apprenticeship program and a Fleet Bank employee, introduce the President of the United States at the signing of the School-to-Work Opportunities Act of 1994.

Through the Boston Private Industry Council's participation in a school-business partnership called the Boston Compact, corporate Boston brings thousands of public high school students into our companies. Each summer, the PIC organizes over 700 employers to participate in its summer jobs program. More than 3,000 youth are hired each summer by local companies. During the school year, over 900 youth work in after-school jobs. Nearly five hundred students are enrolled in our youth apprenticeship and national academy initiatives. And the wages for students are all paid directly by the participating businesses, who view this as an investment in workforce development.

Five years ago, this longstanding commitment to youth employment took a dramatic turn for the better. Teachers and workplace supervisors began meeting with one another to integrate the lessons learned on the job with teaching in the classroom. Students, many of whom were failing in the traditional academic setting, began to respond to higher expectations, both at work and back at school. Employers began to dedicate substantial resources to train and support student workers. Clear proof that this new approach works.

Why did this happen? I might be tempted to say that we in Boston had a good idea and made it happen. But the fact is that the good idea happened here in Washington. Under the leadership of President George Bush, the Department of Labor initiated a set of demonstration projects. The model was called youth apprenticeship at the time. In Boston, we started ProTech, a pilot project which has expanded 400% in four years, and we changed the way employers and schools collaborate to educate students at all levels.

In 1994, the federal government acted again. This time, under President Clinton's leadership, Congress enacted the School-to-Work Opportunities Act of 1994. The focus shifted from program to system. This new methodology -- now called "school-to-work" -- has caused us to think very differently about high school education. School-to-work -- or school-to-career as we prefer to call it in Boston -- is now about creating working and learning opportunities for all students. It is guiding the restructuring of our district high schools as well as the revitalization of our vocational-technical high school. We are now using the workplace as a real learning environment, not just an after school job.

The national school-to-work initiative serves as a true catalyst for attracting increased business involvement and support for the youth of Boston. For example, we calculate that student wages paid directly by local employers total over $7 million annually. This isn't out of the corporate giving accounts, but from direct operations expenditures. Employers have changed the way they train and support students in their workforce. The national school-to-work initiative is helping Boston employers to consolidate and focus the often uncoordinated array of programs we fund in support of the schools. Schools are also making substantial contributions as a result of the school-to-work initiative. The cost of the salaries and benefits of teachers working in the education programs at our seven restructured high schools total over $5 million.

But this isn't just a Boston phenomenon. The Commonwealth of Massachusetts, led by Governor William Weld and Lt. Governor Paul Cellucci, is committed to a statewide restructuring of high school education, with the School-to-Work grant as the catalyst. Business leaders across the state, as well as in Boston, understand that the next century demands a more educated and skilled workforce than is now available. Public high schools must be helped to do a much better job of education, and we have come to recognize that can only be done through collaborative efforts at the school district and labor market levels.

I am often asked how we have been able to recruit employers to participate in this system-building effort. The most compelling reasons come directly from my own experiences.

First, as a business, Fleet Bank has been asked in the past to contribute to the community in ways that often yielded unsatisfying results, especially in terms of student performance. Now, with the working and learning programs developed in Boston, we have found that our contributions and our direct involvement really make a difference in how students are prepared and educated. And the proof is evident both in the classroom and on the job.

The second reason I give is one of self-interest. We are always looking for talented employees. Through the school-to-career initiative in Boston we have helped to create a process that allows us to develop talented employees.

Both of these reasons, however, reflect a long-term perspective about why we are involved. What most employers need to know in the short-run is that students will show up at their doors ready to work. Employers also need to know that when issues surface, as they will with young employees, someone is available to help resolve problems, so the supervisor and the student can go on about the business of work.

In Boston, we have a corps of highly motivated, talented staff who work well with supervisors, students and teachers to bridge the different worlds and cultures of the workplace, classroom and neighborhood. They embody the concept of connecting activities cited in the legislation, and they are the real secret of our success.

Things are now different because of the school-to-work legislation. Employers heard the signal from Washington that changes were needed and they have responded. Companies have changed they way young people are educated and trained for jobs and careers, and they have redirected substantial corporate resources to match federal support at a 5-to-1 ratio. And, they have made a long-term commitment to youth workforce development.

Therefore, it is with great concern that we hear that Congress is considering a repeal of the School-to-Work Opportunities Act little more than a year after its enactment. This law does not establish a new federal program with a permanent bureaucracy. It is a federal policy initiative with a legislated sunset date of 2001. The limited life granted this program is designed to initiate school-to-work efforts in all our states and it should be allowed to realize its potential.

From a New England perspective, Massachusetts and Maine have already benefited as implementation states, and Nashua, New Hampshire, New Haven, Connecticut and Boston as local partnerships. We want to see Vermont and Rhode Island receive the same jump start from this dynamic federal initiative, and we want to see this idea replicated across the U.S.

Our appeal is simple. The School-to-Work Opportunities Act is a good transitional tool as Congress seeks new ways to help youth find their place in society and it makes a powerful contribution to dealing with our educational crisis. Leave the Act on the books and allow it to die the natural death Congress envisioned for it at its creation. This approach may prove to be a valuable model for launching federal policy without establishing permanent programs and bureaucracies.

Simultaneously, we think it would be wise to preserve the gains of this bi-partisan initiative within any block grant or consolidation structure the full Committee chooses to create by designating that a certain percentage of the funds be used for school-to-work initiatives. This will allow states to craft their own school-to-work system with the assurance of ongoing support. It will also ensure that this approach is implemented in all states. For companies like Fleet which operate in many states, some level of consistency across state lines is very important.

Finally, we urge that federal money dedicated to school-to-work be channeled through public-private partnership entities. As Senator Kennedy knows, we have already created these entities in what Massachusetts calls Regional Employment Board. The REBs act as the conveners for schools, business, community colleges and others around a broad array of workforce development issues, including school-to-work. If we want employers to participate in the change process at the workplace as well as the schools, we need to make sure that the employer seat at the table is secure. Government should not be in the business of developing a reform as dramatic as school-to-work without the full participation of employers at every phase. This should be a keystone of federal policy for workforce development through the new block grant and consolidation legislation.

The current national school-to-work initiative has the full bi-partisan support of the political and corporate leadership of Boston and Massachusetts. I am joined today by Bill Spring who co-chairs the Massachusetts School-to-Work Task Force on behalf of Governor William Weld and Lieutenant Governor Paul Cellucci. Bill is also the school-to-career leader on the Boston School Board, recently reappointed by Mayor Thomas Menino. The Boston Private Industry Council is managing the development of the school-to-career system in our city and the Associated Industries of Massachusetts has recently agreed to lead the employer recruitment effort throughout the Commonwealth of Massachusetts.

At times, all this consensus and cooperation may seem too good to be true. It is certainly too good to end. I urge you to preserve the federal policy established by the School-to-Work Opportunities Act long enough for our effort to take root even as you seed this new approach to working and learning throughout the country. I urge you to craft a school-to-work designation within any block grant legislation and require that employers be equal partners in this system by channeling these funds through partnership entities.

We have made an important step in the reform of public education and the training of a competitive workforce. This limited approach to federal policy making will give us a fighting chance to change outmoded, status quo approaches at the local level. We followed your lead. Now we ask that you stay with us.

Thank you

[Whereupon, at 12:32 p.m., the subcommittee was adjourned.]

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